United States Circuit Court of Appeals

FOR THE SIXTH CIRCUIT.

No. 964.

GENERAL EXCAVATOR COMPANY,
Appellant,

vs.

KEYSTONE DRILLER COMPANY,
Appellee,

KEYSTONE DRILLER COMPANY,
Cross-Appellant,

vs.

GENERAL EXCAVATOR COMPANY,
Cross-Appellee.

No. 965.

THE OSGOOD COMPANY,
Appellant,

vs.

KEYSTONE DRILLER COMPANY,
Appellee.

KEYSTONE DRILLER COMPANY,
Cross-Appellant,

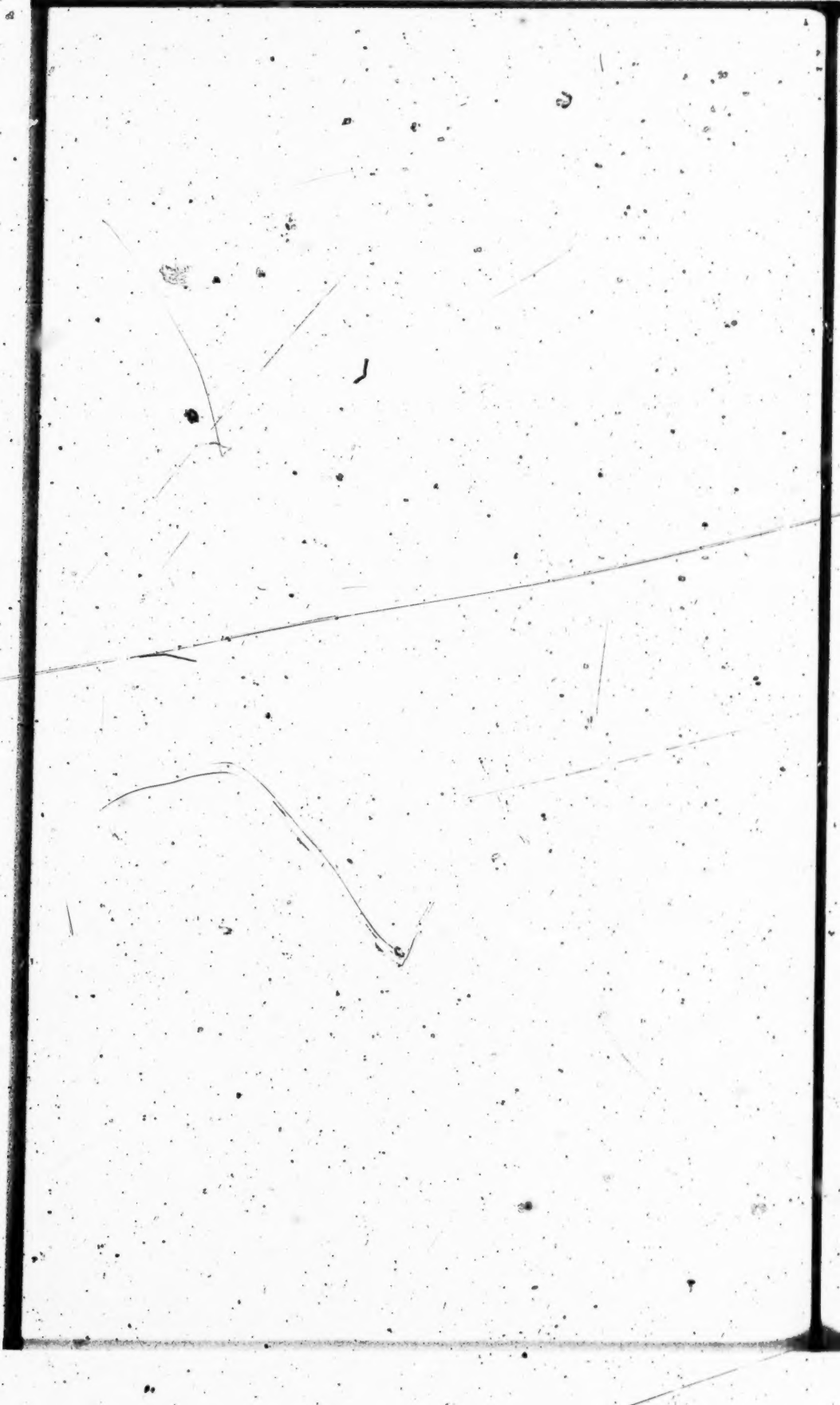
vs.

THE OSGOOD COMPANY,
Cross-Appellee.

APPEALS FROM THE UNITED STATES DISTRICT COURT,
FOR THE NORTHERN DISTRICT OF OHIO,
WESTERN DIVISION.

TRANSCRIPT OF RECORD
VOLUME I
TRIAL PLEADINGS AND TESTIMONY

NAMES AND ADDRESSES OF COUNSEL
(Inside Front Cover)



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CAPTION.

UNITED STATES OF AMERICA,
NORTHERN DISTRICT OF OHIO,
WESTERN DIVISION, ss.

RECORD of the proceedings of the District Court of the United States within and for the Western Division of the Northern District of Ohio, in the cause and matter hereinafter stated, the same being finally disposed of at a regular term of said Court begun and held at the City of Toledo, in said District, on the last Tuesday in April, being the 28th day of said month in the year of our Lord One Thousand Nine Hundred and Thirty-one, and of the Independence of the United States of America the One Hundred and Fifty-sixth, to-wit: on Tuesday, the 21st day of July, A. D., 1931.

Present: Honorable GEORGE P. HAHN, *United States District Judge.*

KEYSTONE DRILLER COMPANY,
vs.
THE GENERAL EXCAVATOR COMPANY. } No. 964 IN EQUITY.

KEYSTONE DRILLER COMPANY,
vs.
THE OSGOOD COMPANY. } No. 965 IN EQUITY.

Said action was commenced on the 9th day of February, A. D., 1929, and proceeded to final disposition at the term and day above written, and during the progress thereof, pleadings and papers were filed, process was issued and returned and orders of the Court were made and entered in the order and on the dates hereinafter stated, to-wit:

ORDER OF CONSOLIDATION FOR APPEAL.

(Entered Sept. 15, 1931, by Geo. P. Hahn, Judge.)

[Case No. 964]

It appearing to the Court that the cases of Keystone Driller Company vs. The General Excavator Company and Keystone Driller Company vs. The Osgood Company Nos. 964 and 965 respectively were consolidated for trial, and it further appearing that the best interest of everyone concerned can be served by the consolidation of the printed record in these cases to be sent to the Circuit Court of Appeals,

IT IS THEREFORE ORDERED That the said cases be consolidated into one printed record for the purpose of their removal to the Circuit Court of Appeals for the Sixth Circuit, said record to contain pleadings and papers in each individual case but to include only one copy of such records as appear identical in each case.

GEO. P. HAHN,
United States District Judge.

Dated September 15, 1931.

BILL OF COMPLAINT.

(Filed Feb. 9, 1929.)

[Case No. 964]

To the Honorable, the Judges of the District Court of the United States for the Northern District of Ohio, Western Division:

Keystone Driller Company, plaintiff, brings this its bill of complaint against The General Excavator Company, defendant; and plaintiff avers:

I. Plaintiff is a corporation of the State of Pennsylvania, having its principal place of business at Beaver Falls, Pennsylvania, and is a citizen and inhabitant of said State of Pennsylvania.

On information and belief, defendant is a corporation of the State of Ohio, having its principal place of business at Marion, Marion County, Ohio, and is a citizen and inhabitant of said State of Ohio and of the Northern District of Ohio, Western Division.

II. The Court's jurisdiction in this cause is based upon the grounds that the suit is one for infringement of United States patents and prays equitable relief and that the defendant is an inhabitant of the aforesaid district and/or has therein a regular and established place of business where it has committed acts of infringement hereinafter complained of.

III. On and prior to February 11, 1915, Le Roy P. Clutter, a citizen of the United States, then residing at Beaver Falls, Pennsylvania, was the original, first and true inventor of certain new and useful improvements in Ditching or Excavating Machines, not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his hereinafter mentioned application for patent therefor in the United States, and not in public use or on sale in the United States for more than two years prior to said application, and not by him abandoned prior to said application, and not first patented or caused to be patented by him or his legal representatives or assigns in any foreign country upon an application filed more than twelve months prior to the filing of said application in the United States. So being the original, first and true inventor, as aforesaid, said Le Roy P. Clutter, on February 11, 1915, made application to the Com-

missioner of Patents of the United States for a patent for said invention, in accordance with the then existing laws of the United States, and complied in all respects with the conditions and requirements of said laws.

IV. Upon said application of Le Roy P. Clutter, due proceedings were had, in accordance with all requirements of law, such that on September 30, 1919, United States patent No. 1,317,431, signed, sealed and executed in due form of law, was issued for said invention or improvements in Ditching or Excavating Machines, to said Le Roy P. Clutter. And plaintiff brings here into court a copy of said patent and prays that the same may be taken as part of this bill of complaint.

V. For good and valuable consideration, by an instrument in writing executed and delivered on or about May 17, 1921, said Le Roy P. Clutter assigned unto plaintiff the entire right, title and interest in and to said patent No. 1,317,431, together with all rights of recovery for past infringement thereof; as by reference to said instrument or a duly authenticated copy thereof here in court to be produced will more fully appear.

VI. On and prior to June 27, 1921, Robert Rex Downie, a citizen of the United States, then residing at Beaver Falls, Pennsylvania, was the original, first and true inventor of new and useful improvements in Excavating Machines, not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his hereinafter mentioned application for patent therefor in the United States, and not in public use or on sale in the United States for more than two years prior to said application, and not by him abandoned to the public, and not first patented or caused to be patented by him or his legal representatives or assigns, in any foreign country upon an application filed more than twelve months prior to the filing of said application in the United States. So being the original, first and true inventor, as aforesaid, said Robert Rex Downie, on June 27, 1921, made application to the Commissioner of Patents of the United States for a patent for his said invention, in accordance with the then existing laws of the United States, and complied in all respects with the conditions and requirements of said laws.

VII. For good and valuable consideration, by an instrument in writing executed and recorded in the Patent Office before the grant of a patent on his said application, the said Robert Rex Downie assigned to plaintiff the whole right, title and interest in and to his said invention and authorized the Commissioner of Patents to issue the patent for said invention to the plaintiff.

VIII. Upon said application of Robert Rex Downie, and pursuant to his said assignment to plaintiff, due proceedings were had, in accordance with all requirements of law, such that on October 7, 1924, United States patent No. 1,511,114, signed, sealed and executed in due form of law, was issued to plaintiff for said invention or improvements in Excavating Machines. And plaintiff brings here into court a copy of said patent No. 1,511,114 and prays that the same may be taken as part of this bill of complaint.

IX. On and prior to January 8, 1925, Robert Rex Downie, a citizen of the United States, then residing at Beaver Falls, Pennsylvania, was the original, first and true inventor of certain new and useful improvements in Excavating Machines, not known or used by others in this country before his invention or discovery thereof, not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his hereinafter mentioned application for patent therefor in the United States, and not in public use or on sale in the United States for more than two years prior to said application, and not by him abandoned to the public, and not first patented or caused to be patented by him or his legal representatives or assigns in any foreign country upon an application filed more than twelve months prior to the filing of said application in the United States. So being the original, first and true inventor, as aforesaid, said Robert Rex Downie, on January 8, 1925, made application to the Commissioner of Patents of the United States for a patent on his said invention, in accordance with the then existing laws of the United States, and complied in all respects with said laws.

X. For good and valuable consideration by an instrument in writing executed and recorded in the Patent Office before the grant of a patent on his said application of January 8, 1925, the said Robert Rex Downie assigned to plaintiff the whole right, title and interest in

and to his said invention set forth in the application last mentioned, and authorized the Commissioner of Patents to issue the patent therefor to the plaintiff.

XI. Upon said Robert Rex Downie's said application of January 8, 1925, and pursuant to his assignment to plaintiff of the invention described therein, due proceedings were had, in accordance with all requirements of law, such that on June 23, 1925, United States patent No. 1,543,250, signed, sealed and executed in due form of law, was issued to plaintiff for said invention or improvements in Excavating Machines. And plaintiff brings here into court a copy of said patent No. 1,543,250 and prays that the same may be taken as part of this bill of complaint.

XII. By reason of the premises, prior to the filing of this bill of complaint, and prior to the acts of infringement hereinafter complained of, plaintiff became and has ever since remained and now is the sole owner of said patents Nos. 1,317,431, 1,511,114 and 1,543,250, and of all rights thereunder including all rights of recovery for past infringement of said patent 1,317,431 since the date of the assignment thereof.

XIII. Under the protection of the aforesaid patents, plaintiff is engaged in the manufacture and sale of Excavating Machines embodying said inventions. Said inventions of said patents and each of them are of great utility and value, and have come extensively into public use, with substantial benefits to the public and to the plaintiff. The plaintiff has been to large effort and expense in and about said inventions for the purpose of introducing them into use and supplying embodiments thereof. Its business in this connection is now threatened with irreparable injury by the acts of defendant hereinafter complained of.

XIV. Prior to December 22, 1926, The Byers Machine Company, a corporation of Ohio, doing business at Ravenna, Ohio, within the Northern District of Ohio and the Eastern Division thereof, made, used and sold and was threatening to continue to make, use and sell excavating machines embodying the inventions set forth in said patents Nos. 1,317,431, 1,511,114 and 1,543,250 and in infringement and in violation of the rights of the plaintiff, Keystone Driller Company, under the aforesaid letters patent; wherefore said plaintiff, on December 22, 1926 brought its bill of complaint in the District Court

of the United States for the Northern District of Ohio, Eastern Division, at Cleveland, Ohio, against said The Byers Machine Company, and in said suit (Equity No. 2084) complained that the said The Byers Machine Company had infringed claim 4 of patent No. 1,317,431 and claims 1 to 14 inclusive of patent No. 1,511,114 and claims 1 to 10 inclusive of patent No. 1,543,250 and threatened further infringement of said letters patent; and said The Byers Machine Company filed its answer to the said bill of complaint; that after the filing of said answer, by stipulation between counsel for the parties to said suit, Byers Machine Company, a corporation of Maryland, was made a party defendant, and the bill of complaint filed December 22, 1926 was amended *nunc pro tunc* to include this new party defendant, Byers Machine Company, and said Byers Machine Company filed an amended answer to the amended bill of complaint; and said cause was tried before the Hon. D. C. Westenhaver, at Cleveland, Ohio, on September 15, 16 and 19, 1927 and was submitted on the briefs of the opposing parties without oral argument by counsel for the respective parties, that the Hon. D. C. Westenhaver died in July, 1928 without having rendered an opinion; that by stipulation between counsel for the respective parties the cause was submitted to the Hon. Paul Jones, District Judge, at Cleveland, Ohio, without a second trial, and was argued before him on January 9, 1929 by counsel for the respective parties; and on the twenty-third day of January, 1929 the court rendered its opinion sustaining the validity of claim 4 of patent No. 1,317,431, claims 1 to 14 inclusive of patent No. 1,511,114 and claims 1 to 10 inclusive of patent No. 1,543,250, and finding all said claims infringed; and on the thirty-first day of January, 1929 a final decree was entered for the plaintiff, Keystone Driller Company, affirming the validity of the claims aforesaid, and ordering a perpetual injunction enjoining and restraining said The Byers Machine Company and Byers Machine Company and each of them from infringing said claims, as will fully appear by reference to the attached copy of the decree; and said perpetual injunction was accordingly issued February 1, 1929 and served that day on a duly authorized agent for said defendants.

XV. Since the respective dates of issue of said patents Nos. 1,317,431, 1,511,114 and 1,543,250, and since the plaintiff acquired its title to and rights under said patents as hereinbefore recited, and within six years next

preceding the filing of this bill of complaint, and without leave of or license from plaintiff, and in defiance of said patents and each of them and of plaintiff's rights thereunder, the said The General Excavator Company has made and/or caused to be made and has used and has sold, and is now making, using and selling, within said Northern District of Ohio, Western Division, and elsewhere within the United States of America, numerous excavating machines embodying the inventions described and claimed in and patented by said patents Nos. 1,317,431, 1,511,114 and 1,543,250, and each of them, in infringement of said patents and each of them, and particularly in infringement of claims 1, 3, 4 and 9 of said patent No. 1,317,431, of claims 6, 7, 8, 9, 10, 11, 12, 13 and 14 of said patent No. 1,511,114, and of claims 1, 2, 3, 4, 5, 6, 9 and 10 of said patent No. 1,543,250, all as by reference to the accompanying affidavit of Robert Rex Downie together with the exhibits attached thereto will more fully appear.

XVI. Defendant has derived and continues to derive unlawful gains and profits from said infringement, and plaintiff has suffered and is threatened with irreparable damage by reason of said infringement. Defendant threatens to continue all of said acts above complained of. Defendant by its acts aforesaid has impaired plaintiff's enjoyment of its exclusive rights and privileges granted upon issue of said letters patent, and each of them, and has unjustly deprived plaintiff of large profits which it would have realized and enjoyed from said inventions except for defendant's infringement.

XVII. The inventions of the aforesaid patents are susceptible of conjoint embodiment and use in one and the same construction, and have been so conjointly embodied and used in the machines made and sold by defendant as aforesaid.

XVIII. Plaintiff has given notice to the public that its machines are patented by fixing thereon the word "patented" together with the day and year each of its aforesaid patents was granted. Plaintiff has also specially notified defendant of said patents and of plaintiff's ownership thereof and of the infringements complained of, but said defendant has continued and will unless restrained continue its acts complained of notwithstanding and in spite of said notice.

WHEREFORE plaintiff prays:

(a) That the defendant, The General Excavator Company, be directed to appear and answer this bill of complaint (but not under oath, answer under oath being expressly waived), and to abide by and perform such orders and decrees as the court may deem proper.

(b) That the defendant, The General Excavator Company, and its officers, agents, servants, employees, and all persons in privity with them and each of them, be enjoined and restrained *pendente lite*, by decree and injunction of this court, from directly or contributorily infringing plaintiff's said patents Nos. 1,317,431, 1,511,114 and 1,543,250, and each of them.

(c) That the defendant, The General Excavator Company, and its officers, agents, servants, employees, and all persons in privity with them, and each of them, be enjoined and restrained perpetually, by decree and injunction of this court, from directly or contributorily infringing plaintiff's said patents Nos. 1,317,431, 1,511,114 and 1,543,250 and each of them.

(d) That the defendant, The General Excavator Company, be required to account to plaintiff for the profits realized by defendant and the damages to plaintiff in the premises; and that this cause be referred to a Master to take an accounting of said profits and damages; and that such damages be increased to three times the amount thereof or as to the Court may seem meet in view of all the circumstances.

(e) That said defendant be decreed to pay the costs and disbursements of this suit to be taxed.

(f) And that plaintiff have such other and further relief as to the court may seem meet.

KEYSTONE DRILLER COMPANY,
ROBERT REX DOWNIE,
Secretary.

GEO. E. KIRK,
Solicitor.

RICHEY & WATTS,
Solicitors.

PHILIP E. SIGGERS,
Of Counsel.

Verification.

STATE OF OHIO,
COUNTY OF CUYAHOGA, ss.

Robert Rex Downie, being duly sworn, deposes and says that he is Secretary of the corporation Keystone Driller Company, the plaintiff named in the foregoing bill of complaint; that he has read this bill; that insofar as the statements contained in this bill are within his knowledge they are true, and so far as they are derived from information and belief, he verily believes them to be true.

ROBERT REX DOWNIE.

Subscribed and sworn to before me this 7th day of February, 1929.

FLORENCE ANN KOFSKY,
(Notarial Seal). *Notary Public.*

PRINTER'S NOTE:

Copies of U. S. Patents Nos. 1,317,431 to LeRoy P. Clutter; 1,511,114 to Robert R. Downie and 1,543,250 to Robert R. Downie were attached to this Bill of Complaint, but same have been omitted at this point, as they are listed as a part of Defendant's Exhibit No. 62, Book of Patents.

FINAL DECREE.

(In the case of *Keystone Driller Company vs. The Byers Machine Company and Byers Machine Company,* in the U. S. District Court for the Northern District of Ohio, Eastern Division, being Equity Case No. 2084.)

(Entered January 31, 1929, by Paul Jones, Judge.)

This cause came on to be further heard at this term, and was argued by counsel; and thereupon, upon consideration thereof, it was ordered, adjudged and decreed as follows, viz:

(1) That Letters Patent of the United States to LeRoy P. Clutter, No. 1,317,431, dated September 30, 1919, for Ditching or Excavating Machine, is good and valid in law as to claim 4 thereof; that the inventor, LeRoy P. Clutter, named in the said patent was the first, true and original inventor of the invention, improvement and combination described in said claim 4; and that the Plaintiff, Keystone Driller Company, is the lawful owner of the entire right, title and interest in and to said inven-

tion and in and to the Letters Patent therefor as aforesaid;

That Letters Patent of the United States to G. E. Wagner, *et al.*, No. 1,476,121, dated December 4, 1923, for Excavating Scoop, is good and valid in law as to claims 6 and 7 thereof; that the inventors G. E. Wagner, *et al.*, named in the said patent, were the first, true, original and joint inventors of the inventions, improvements and combinations described in claims 6 and 7 of said patent; and that the Plaintiff, the Keystone Driller Company, is the lawful owner of the entire right, title and interest in and to said inventions and in and to the Letters Patent therefor as aforesaid;

That Letters Patents of the United States to Robert Rex Downie, No. 1,511,114, dated October 7, 1924, and No. 1,543,250 dated June 23, 1925 for Excavating Machines, are good and valid in law as to all the claims of each patent thereof; that the inventor, Robert Rex Downie, named in the said patents was the first, true and original inventor of the inventions, improvements and combinations described in the said patents and in said claims; and that the Plaintiff, the Keystone Driller Company, is the lawful owner of the entire right, title and interest in and to said inventions and in and to the said Letters Patents therefor as aforesaid;

That the Defendant, The Byers Machine Company, has infringed upon said Letters Patents within the Northern District of Ohio, Eastern Division, and elsewhere in the United States, by the manufacture, sale and/or use of Ditching or Excavating Machines, Excavating Scoops and Excavating Machines employing and/or embodying the inventions set forth in the claims of certain of said patents, and particularly upon claim 4 of Patent No. 1,317,431 by the manufacture, sale and/or use of machines illustrated on pages 2, 10 and 11 and elsewhere in Exhibit 16 and upon pages 2, 6, 14, 16, 17, 18, 19, 50 and 58 and elsewhere in Exhibit 17; all of the claims of Patent No. 1,511,114 by the manufacture, sale and/or use of the machines illustrated on pages 2, 10 and 11 and elsewhere in Exhibit 16 and upon pages 2, 6, 14, 16, 17, 18, 19, 50 and 58 and elsewhere in Exhibit 17; and all of the claims of Patent No. 1,543,250 by the manufacture, sale and/or use of the machines illustrated on pages 2, 10 and 11 and elsewhere in Exhibit 16 and upon pages 2, 6, 14, 16, 17, 18, 19, 50 and 58 and elsewhere in Exhibit 17; and the Defendant, Byers Machine Company, has in-

fringed upon said Letters Patents within the Northern District of Ohio, Eastern Division, and elsewhere in the United States, by the manufacture, sale and/or use of Ditching or Excavating Machines, Excavating Scoops and Excavating Machines employing and/or embodying the inventions set forth in the claims of certain of said patents, and particularly upon claims 6 and 7 of Patent No. 1,476,121 by the maufacture, sale and/or use of the machines illustrated on pages 8, 9, 21, 22, 23, 24, 26 and 50 and elsewhere in Exhibit 18; and claims 6 to 14, both inclusive of Patent 1,511,114 by the manufacture, sale and/or use of the machines illustrated on pages 8, 9, 21, 22, 23, 24, 26 and 50 and elsewhere in Exhibit 18; and Byers Machine Company is threatening to infringe claim 4 of said Clutter patent, No. 1,317,431 and claims 1 to 5, inclusive, of said Downie patent, No. 1,511,114 by offering to sell and/or use machines like those illustrated in the said pages of Exhibits 16 and 17; and The Byers Machine Company is threatening to infringe claims 6 and 7 of the patent to Wagner *et al.*, No. 1,476,121 by offering to sell and/or use machines like those illustrated in the said pages of Exhibit No. 18;

(2) That the Plaintiff do recover from each of the Defendants, The Byers Machine Company and Byers Machine Company, all profits, gains and advantages which the said Defendants, have or shall have derived, received or made by reason of said infringements, and that the Plaintiff do recover from each of said Defendants any and all damages which the Plaintiff has sustained, or shall sustain by reason of said infringement by said Defendants;

(3) That this cause be, and the same is hereby referred to ..... Esq., a Master, to ascertain the amount of such gains and profits and the amount of damages sustained by said Plaintiff by reason of such infringement; that the Defendants file their respective accounts with said Master in accordance with the Rules of Equity of the Supreme Court of the United States relevant thereto; that on such accounting the Plaintiff shall have the right to cause an examination of the officers, servants, agents, and employees of the Defendants and of each of them orally or otherwise, and also to cause the production of Defendants' books, vouchers, accounts, bills of lading, shop orders, and all documents relating to the manufacture of ditchers and parts thereof by Defendants and each of them, and that said

Defendants, through their representatives, attend for such purpose before the Master from time to time as said Master shall direct; and that all testimony and exhibits offered and used in this cause on behalf of either party may be referred to and used in such accounting;

(4) That an injunction be issued out of and under the seal of this Court direct to the Defendants, The Byers Machine Company and Byers Machine Company, and each of them, and each of their officers, servants, agents, employees and workmen, and all their privies, and each and every one of them, enjoining and restraining them during the remainder of the respective terms of said Letters Patents, No. 1,317,431, No. 1,476,121, No. 1,511,114 and No. 1,543,250, from directly or indirectly constructing, or causing to be constructed, and/or using, and/or selling, or causing to be used or sold, or advertising for sale, ditching or excavating machines and excavating scoops like apparatus illustrated in Plaintiff's Exhibit 16, page 2, the lower figure thereon, page 10, the left figure thereon and page 11 and elsewhere in the exhibit, Plaintiff's Exhibit 17, page 2, the lower left figure thereon, page 6, the uppermost figure thereon, page 14, pages 16, 17, 18, 19, 50 and 58 and elsewhere in the exhibit, Plaintiff's Exhibit 18, pages 8, 9, 21, 22, 23, 24, 26 and 50 and elsewhere in the exhibit, and any other apparatus, articles, devices or parts, and/or combinations, containing, employing or embodying the inventions and improvements described in said Letters Patents, No. 1,317,431 and particularly referred to in claim 4 thereof, and No. 1,476,121, and particularly referred to in claims 6 and 7 thereof, and No. 1,511,114 and No. 1,543,250 and particularly referred to in the claims thereof or any of them, or apparatus, article, devices, ditching or excavating machines or excavating scoop to be used, or capable only of use, in a combination infringing any of said patents, and from infringing and contributing to infringement upon or violating any of said Letters Patent in any way whatsoever;

(5) That the Plaintiff recover from the Defendants, the Plaintiff's full costs in this suit to be taxed and to have execution therefor.

Entered this 31st day of January, 1929.

PAUL JONES,

United States District Judge.

Approved as to form this 31st day of January, 1929.

FAY, OBERLIN & FAY,

Attorneys for Defendants.

OPINION OF JONES, JUDGE.

(In the Case of *Keystone Driller Company vs. The Byers Machine Company and Byers Machine Company,* in the U. S. District Court for the Northern District of Ohio, Eastern Division, being Equity No. 2084.)

(Filed January 23, 1929.)

JONES, *J.:*

This cause was tried and submitted to the Hon. D. C. Westenhaver in September, 1927. Due to his sickness and subsequent death, it was not decided. By written stipulation of counsel for the parties, it was agreed that the matter should be submitted without re-trial to one of the Judges of this Court; and upon oral argument had January 9th, 1929, the matter was submitted on the record and briefs.

This is a patent infringement suit involving pull stroke ditchers or excavating scoops and machines. They are distinguished from the ordinary steam shovel in that they dig inwardly, toward the operating machine, as a pick or hoe, rather than away from the machine, as a shovel. The pull stroke or inwardly digging shovel has an outstanding advantage over the ordinary steam shovel in that the ditch or trench is cut the width of the bucket only, and the machine always remains on solid ground as the excavation progresses, rather than astride or over the wall of the ditch or trench. Another advantage urged for this type of machine is its interchangeable character—that is, construction for other uses may be applied to the same operating machinery. The patents claimed to be infringed are, generally speaking, combinations of old elements producing improvements and advantages over prior conceptions and embodying many of the functional elements of earlier invention. Plaintiffs contend that Claim 4 of Clutter patent 1,317,431, Claims 5, 6, 7 and 9, of Wagner 1,476,121, and all claims of the two Downie patents 1,511,114 and 1,543,250, are infringed by the defendants' constructions. It is the plaintiff's claim that the infringing use of these inventions is disclosed by plaintiff's exhibits 16, 17 and 18, which are to be found in the defendants' advertising catalogs and referred to as, "Byers Bear Cat."

One of the chief advantages claimed for the plaintiff's machine is its ability to break through, with a hammer-like blow, rock, shale, sandstone, and the like, found near the ground surface, thus doing away with considerable blasting. Another advantage being its con-

trol by two lines, or two control members; and, further, that it has the advantage of exact spotting in a wide area or range for the discharge of the spoil or contents of the scoop, having the falling bottom which may be closed by momentum produced by manipulation of the scoop, thus accomplishing, perhaps, old results in a new and useful manner, as well as obtaining new and better results by reason of a novel combination of some old elements. Such a result has been repeatedly held to require inventive faculty and produce invention.

Without going into detail or discussing technical means, I think the plaintiff's patents have initiated and accomplished, in a practical, commercial, and economical way, an advance in the field of mechanical digging, and that through its efforts and development have produced a better and, in substantial respects, a new result out of old elements in the art of trenching and ditching.

It is not thought necessary here to review the extensive reference to the prior art, since from an examination thereof nothing suggests or anticipates the novel operative control and other commercial advantages found in the claims in suit. It seems to me that the plaintiff, through the successive steps of Clutter, Wagner, and Downie, has developed the art over the earlier disclosures. I am satisfied, from a reading of the transcript of the testimony and the evidence in the case, that the defendants' construction was the result of the study of plaintiff's conceptions, Clutter, Wagner, and Downie, and the copying of the plaintiff's construction and mechanism.

The parts of the defendants' machines are combined and function in precisely the same way as the plaintiff's commercial machine. The defendant has taken substantially the plaintiff's patents. I find no substantial variation in the construction of the defendants' machine which is not within the scope of the claims relied upon or the result of mechanical suggestion and change. One of the most important accomplishments claimed by the plaintiff for its commercial machine, that of the two-member control, appears to have been stressed in the "Byers Bear Cat" catalog by the legend appearing in plaintiff's Exhibit 17, "The All-Purpose One-Man Crane," and as appears in plaintiff's Exhibit 18, "The All-Purpose One-Man Crane-Shovel."

Defendants' machines, as appear in plaintiff's Exhibits 16 and 17 (defendants' catalogs), though function-

ally differing in respect of the link or pivotal means, would seem to substantially embody the construction found in Claim 4 of Clutter, 1,317,431. It is the defendants' third construction, as illustrated by plaintiff's Exhibit 18 (Defendants' catalog), which it is contended infringes Wagner, 1,476,121. Any difference in positioning or attaching the hauling line to the ditcher stick, rather than to the open end of the scoop, is not, as I see it, a distinction sufficient to avoid infringement; no more than the difference with respect to the scoop attachment or mounting being centrally pivoted in the plaintiff's machine and flexibly mounted in the defendants'. They appear to me to embody substantially the same idea and to serve the same purpose. While the liberal treatment accorded the many claims of the Downie patents might not be extended to the various elements as units, yet the combination of admittedly old elements perform additional functions and accomplish additional results. Any weakness in that respect, it seems to me, is overcome by their novel and useful combination and commercial success.

Some question as to notice was also raised, but I find no omission in that respect to warrant a finding of failure or neglect upon which to base a denial of relief to the plaintiff.

The patents are valid and infringed as to the claims relied upon. A decree may be entered for the plaintiff, with injunction and accounting.

PAUL JONES,
United States District Judge.

January 23, 1929.

PLAINTIFF'S INTERROGATORIES.

(Filed Feb. 9, 1929.)

[Case No. 964]

Now comes the Plaintiff and presents the following interrogatories under the Equity Rules in such cases made and provided, each and all of said interrogatories to be answered in writing and under oath by an officer or employee of the Plaintiff, or by a person in authority

connected with Defendant and having knowledge of the facts inquired about:

(1) Did The General Excavator Company, the Defendant in this case, issue and distribute the catalogs or bulletins attached hereto and marked Exhibits 1 and 2, between June 23, 1925 and February 7, 1929?

(2) Did The General Excavator Company write and mail the letter to Frank L. Sessions dated March 29, 1928 and marked Exhibit 3, on or about March 29, 1928?

(3) Was F. B. Morrison the Manager in Charge of Sales of The General Excavator Company, on or about March 29, 1928?

(4) Did The General Excavator Company make, use and/or sell at Marion, Ohio, or elsewhere in the Northern District of Ohio, Western Division, between June 23, 1925 and February 7, 1929 "The Ditcher or Trencher" illustrated and described on page eleven, on the right hand side, of bulletin 2703, which is Exhibit 1?

(5) Did The General Excavator Company make, use and/or sell at Marion, Ohio, or elsewhere in the Northern District of Ohio, Western Division, between June 23, 1925 and February 7, 1929, the "backhoes" illustrated on pages one, two, nine, ten, eleven and nineteen of bulletin 2805 and described on pages eight and nine of the same bulletin, which is Exhibit 2?

(6) Did the Defendant receive shortly after the dates of the respective letters, the three letters dated April 11, 1928, January 24, 1929 and January 31, 1929, copies of which are attached to the affidavit of Philip E. Siggers, dated February 7, 1929, filed herewith?

RICHEY & WATTS,
Solicitors for Plaintiff.

GEO. E. KIRK,
SIGGERS AND ADAMS,
PHILIP E. SIGGERS,
Of Counsel for Plaintiff.
Toledo, Ohio,
February 8, 1929.

It is so ordered.

GEO. P. HAHN,
U. S. District Judge.

PRINTER'S NOTE:

To the original of Plaintiff's Interrogatories there were attached two General Excavator Catalogues, (Bulletins 2703 and 2805) marked Exhibit 1 and Exhibit 2, and the letter following.

EXHIBIT 3.

THE GENERAL EXCAVATOR COMPANY—
MARION, OHIO, U. S. A.

March Twenty-ninth 1928

Mr. Frank L. Sessions,
Rockefeller Building,
Cleveland, Ohio.

Dear Sir:—

We acknowledge with thanks receipt of your letter of the 28th requesting additional information on our ditchers and trench digging machinery. We are accordingly handing you herewith a copy of our bulletin No. 2703 which describes and illustrates our Perfected Utility—The GENERAL EXCAVATOR.

We feel certain that the merits of this machine are so apparent from the description given in this bulletin that it is not necessary for us to enter into a lengthy technical explanation of them in this letter. There are however, a few features, but briefly mentioned in the bulletin which we want to bring to your attention:

First: The GENERAL EXCAVATOR was designed by and is kept in the lead by America's most prominent and successful shovel and crane engineers.

Second: The personnel back of the organization building the GENERAL EXCAVATOR has been identified with the development, manufacture, and sale of Earth Moving Equipment for the past half century.

Third: The plant in which the GENERAL EXCAVATOR is built was designed, equipped and manned especially to build this one machine in the one size only, on a production basis. It is a standardized machine built by specialists.

The result of this combination is the perfected Utility. We invite your closest inspection and investigation. Compare it point by point with the field and observe the

number of features exclusively—The GENERAL's. Also see in what way the GENERAL excels on features which may seem similar.

We are pleased to advise you also that Mr. Sheldon M. Hird, 412 Auditorium Building, Cleveland, is representing us in your City. We are, therefore, asking Mr. Hird to call upon you at his earliest convenience and give you any additional information you may desire upon this machine, and we wish to assure you that if you will simply advise us of your needs, we shall be glad to demonstrate how quickly The General's Staff can completely execute your orders.

We want to again thank you for your inquiry, and assuring you we await your further commands with no small amount of interest, we beg to remain,

Yours truly,

THE GENERAL EXCAVATOR COMPANY.
F. B. MORRISON,
Manager in Charge of Sales.

FBM:NL
No. 5
Enc: Bul. 2703

AFFIDAVIT OF ROBERT REX DOWNIE.

(Filed Feb. 9, 1929.)

[Case No. 964]

STATE OF OHIO,
COUNTY OF CUYAHOGA, ss:

ROBERT REX DOWNIE, being duly sworn, deposes and says:

I am Secretary and General Manager of the Plaintiff Company and experienced in machines to which this suit relates and in the operation of the same. I testi-

fied in the case of Keystone Driller Company vs. The Byers Machine Company and Byers Machine Company, which was tried in the Eastern Division of the Northern District of Ohio, and which is referred to in the Bill of Complaint herein.

Since the organization a few years ago, I have known of The General Excavator Company of Marion, Ohio, the Defendant in this case, which is one of the competitors of the Plaintiff and the two Byers Companies.

I have examined the illustration and description of the Back Hoe found on page 11 of Bulletin 2703 of The General Excavator Company, Exhibit No. 1 in this case, and also the Back Hoe illustrated on pages 2, 9, 10, 11 and 19 and described on pages 8 and 9 of Bulletin No. 2805 of The General Excavator Company, marked Exhibit No. 2. Both of said bulletins are attached to the Plaintiff's Interrogatories filed herewith. I have also examined the machine illustrated in Exhibit No. 2 attached to said Plaintiff's Interrogatories. I have seen a number of these machines in operation at various times and various places in the north eastern part of the United States within the last two years, performing work of various kinds including the digging of trenches and ditches, digging in rocky ground, etc. I have examined the machines very closely at these times. Within the last week I saw one of these machines in Military Park, Newark, New Jersey. All of the Defendant's machines, which I saw, contained the elements, or the equivalents thereof, of the Plaintiff's commercial and Byers machines and, in my opinion, contained the elements or the equivalents thereof, recited in the claims of the patents relied upon here. All of the Defendant's machines which I saw operated, operated precisely like and performed all of the important and most of the other functions of the machines of the patents in suit, the Plaintiff's machine and the machines of the two Byers Companies which were held to infringe by His Honor Judge Jones in the Cleveland case. In my opinion, the Defendant's General machines, the Plaintiff's commercial and the Byers' commercial machines are the same in substance. All are used for the same purpose and in competition with each other. I attach photographs marked Exhibits Nos. 7 to 22, inclusive, which I took myself of one of Defendant's machines, which photographs illustrate Defendant's machine in operation.

I am informed and believe that the machines illustrated in Exhibit 2, which I saw operating, were manu-

factured and sold by The General Excavator Company at Marion, Ohio. Name plates bearing the words "General Excavator Company, Marion, Ohio" were attached to the machines I saw and to which I refer. I am further informed and believe that The General Excavator Company is now manufacturing, advertising for sale and preparing to continue to manufacture and sell the machines illustrated in Exhibit 2, at Marion, Ohio.

The General Excavator Company, the Defendant herein, has been notified not only of its infringement of the patents, but of the opinion of Judge Jones and the decree entered in the Cleveland case. The Defendant, I am informed and believe, is threatening to continue to infringe said patents notwithstanding such notices.

Plaintiff developed the machines covered by the patents not only mechanically but commercially. Plaintiff built up the business in these machines from nothing to a large number over a period of years. During this development, the Plaintiff also developed the factory, sales and other organization facilities necessary to take care of the business in these machines. Infringement of this Defendant has contributed to the decline of the business of the Plaintiff in these machines and Plaintiff now finds itself with a surplusage of manufacturing, sales and other organization facilities which it will be unable to maintain and continue unless the infringement of the Defendant is abated. During the year before the infringement of the patents in suit became destructive of Plaintiff's sales, the Plaintiff made about Three Hundred Thousand Dollars ($300,000.00) on the patented machines and the handling machines which are sold with them. During 1928, this profit had been cut down to about Thirty Thousand Dollars ($30,000.00) by the infringers of whom the Defendant was and now is one. In addition to this loss of profits, Plaintiff has suffered damages from such infringement which it is difficult to estimate. Every time the Defendant sells an infringing machine, a new infringer is created in the user, whom it is difficult to pursue and from whom it is difficult to recover for the infringement. Other manufacturers, seeing the infringement of this Defendant, have been encouraged by Defendant's infringement and have also infringed the patents, and others undoubtedly will follow unless Defendant is enjoined. The present organization and equipment of the Plaintiff is more than ample to supply the demand of the public for these machines. Unless the infringement of the patents can be abated, the Plaintiff will be

obliged to reduce its establishment and organization on account of the infringing competition. On the other hand, as shown by its bulletins, the Defendant manufactures many other types of excavating machinery, which it can continue to make and sell even though enjoined from infringing the patents in suit. Issue of the preliminary injunction asked for will merely restore Defendant to its pre-infringing status.

The suit in Cleveland was instituted in December of 1926, was tried in 1927 before His Honor Judge Westenhaver, but due to Judge Westenhaver's sickness and death, the case was not decided until January, 1929, so that there has unfortunately and unavoidably already been unusual delay in proceeding to enforce the patents. Plaintiff has proceeded as fast as it could under the circumstances.

Unless the Preliminary Injunction here asked for is granted, the Plaintiff will suffer irreparable damages.

ROBERT REX DOWNIE.

Subscribed and sworn to before me this 7th day of February, 1919.

FLORENCE ANN KOFSKY,
Notary Public.

(Seal)

AFFIDAVIT OF PHILIP E. SIGGERS.

(Filed Feb. 9, 1929.)

[Case No. 964]

COUNTY OF CUYAHOGA,
STATE OF OHIO, SS.

Philip E. Siggers, being duly sworn, deposes and says that he is of counsel for the Keystone Driller Company, plaintiff in this case; that on April 11, 1928 he notified The General Excavator Company of Marion,

Ohio, defendant in this case, by letter, of its infringement of patents Nos. 1,317,431 and 1,511,114 and of the ownership of said patents by the plaintiff; that Exhibit 4 attached hereto is a true copy of the letter sent defendant on April 11, 1928; that defendant acknowledged in writing receipt of the notice; that on January 24, 1929, he notified defendant by letter which he deposited in the mails that day of the opinion of January 23, 1929 of the District Court of the United States for the Northern District of Ohio, Eastern Division sustaining the validity of claim 4 of patent No. 1,317,431, claims 1 to 14 inclusive of patent No. 1,511,114, and claims 1 to 10 inclusive of patent No. 1,543,250; that attached Exhibit 5 is a true copy of the notification of January 24, 1929; that said defendant, to his personal knowledge, was notified of its infringement of patents Nos. 1,317,431, 1,511,114 and 1,543,250 and also of the intention of the Keystone Driller Company to bring suit shortly and ask for preliminary injunction, said notification being by letter dated and mailed January 31, 1929 from the office of F. O. Richey, Cleveland, Ohio, also of counsel for plaintiff; that attached Exhibit 6 is a true copy of the notification of January 31, 1929; and that defendant, The General Excavator Company, has never, to his knowledge, offered to settle for past infringement, nor has it ceased its infringing acts but on the contrary it has continued to make offers to sell machines infringing claims held valid by decree of the District Court of the United States for the Northern District of Ohio, Eastern Division.

PHILIP E. SIGGERS.

Sworn to and subscribed before me this 7th day of February, 1929.

FLORENCE ANN KOFSKY,
Notary Public.

(Seal)

EXHIBIT 4.

Copy

April 11, 1928.

The General Excavator Company,
Marion, Ohio.

Re: File 1159—General Excavator

Gentlemen:—

This is to notify you formally of your infringement of the following patents owned by the Keystone Driller Company:

1,317,431, Clutter, September 30, 1919
1,511,114, Downie, October 7, 1924.

For some time the Keystone Driller Company has notified the public of its rights under the above patents by attaching to each of its machines metal plates bearing the dates (and recently the numbers also) of said patents, as well as of other patents owned by it. As a member of the public, you have thus received constructive notice of the rights of the Keystone Driller Company arising from the issue of the above-identified patents. Furthermore, Keystone Driller machines bearing patent notices have been exhibited at the Chicago road shows for a number of years past.

As you have been informed, the Keystone Driller Company is now prosecuting a suit for infringement of the above named patents against the Byers Machine Company in the United States District Court in Cleveland. It has also filed suits against the Bay City Dredge Works in the District Court in Bay City. Unless you are prepared to make an accounting for past infringement, or unless you enter into some amicable agreement with the Keystone Driller Company, a suit for infringement may be brought against you to recover profits or damages and to obtain injunctive relief.

A written response to this letter is requested.

Very truly yours,

(Signed) PHILIP E. SIGGERS.

PES:B

EXHIBIT 5.

Copy

January 24, 1929

The General Excavator Co.,
Marion, Ohio.

Re: File 1159

Gentlemen:—

We are writing merely to inform you of the decision of the District Court of the United States for the Northern District of Ohio, Eastern Division, at Cleveland, upholding the validity of the following claims of patents owned by the Keystone Driller Company:

Claim 4 of Clutter patent	1,317,431
Claims 6 and 7 of Wagner et al.	1,476,121

Claims 1-14 incl. of Downie	1,511,114
Claims 1-10 incl. of Downie	1,543,250

All of these claims were held to be infringed by Byers Machine Company. None of the claims sued on was held invalid.

A copy of the court's decision may be obtained from the clerk of the court at Cleveland, from this office or from the Keystone Driller Company, Beaver Falls, Pa.

Very truly yours,

PES:B (Signed) SIGGERS AND ADAMS.

EXHIBIT 6.

Copy

January 31, 1929.

General Excavator Company,
Marion, Ohio.

Gentlemen:—

This will follow the letter of January 24, 1929 written to you by Siggers & Adams from Washington, D. C., and is written in connection with that letter and also the letter of Philip E. Siggers of April 11, 1928 to you. This letter is, as those letters were, written at the direction of the Keystone Driller Company and is for the purpose of advising you that you are infringing the following patents owned by the Keystone Driller Company:

Clutter	No. 1,317,431
Downie	No. 1,511,114
Downie	No. 1,543,250

and further to advise you that we will shortly file a Bill of Complaint against you asking for preliminary injunction, enjoining you from infringing the above named patents which, as Siggers & Adams wrote you, have been sustained by His Honor Judge Jones in the United States District Court for the Northern District of Ohio, unless in the meantime you agree to discontinue your infringement and make suitable settlement for past infringement.

Very truly yours,

(Signed) F. O. RICHEY.

PRINTER'S NOTE:

There were attached to this affidavit sixteen photographs marked from Exhibit 7 to Exhibit 22 inclusive.

MOTION FOR PRELIMINARY INJUNCTION.

(Filed Feb. 9, 1929.)

[Case No. 964]

To the Honorable Judges of the United States District Court for the Northern District of Ohio, Western Division:

Now comes the Plaintiff, and moves this Court, on the Bill of Complaint, the affidavits of Robert Rex Downie and Philip E. Siggers and the records and exhibits, the pleadings, the opinion and the decree in the case of Keystone Driller Company vs. The Byers Machine Company and Byers Machine Company, which was instituted, pended, tried and decided in the Eastern Division of the Northern District of Ohio, for preliminary injunction restraining the Defendant, its confederates, associates, servants, attorneys, agents, clerks and workmen, as prayed for in the Bill of Complaint, from further infringing Letters Patent of the United States to Clutter, No. 1,317,431, Downie, 1,511,114 and Downie, 1,543,250, and for such other and further relief as may seem adequate to the Court.

Plaintiff shows in support of this motion that the title of the said patents as shown in the suit in the Eastern Division of the Northern District, is in the Plaintiff and that the said patents were sustained by His Honor Judge Paul Jones in the Eastern Division of the Northern District of Ohio, and that as shown by the affidavits of Robert Rex Downie and Phillip E. Siggers, and the bulletins of the Defendant filed with the Bill of Complaint, that the Defendant is infringing claims which were held valid in said case of the Plaintiff vs. The Byers Machine Company and Byers Machine Company as aforesaid.

Plaintiff files herewith an Order to Show Cause why this motion should not be granted and such injunction issued.

RICHEY & WATTS,
Solicitors for Plaintiff.

GEO. E. KIRK,
SIGGERS AND ADAMS,
Of Counsel for Plaintiff.

Toledo, Ohio, February 8, 1929.

ORDER TO SHOW CAUSE.

(Entered Feb. 9, 1929 by Geo. P. Hahn, Judge.)

[Case No. 964]

Upon reading the Bill of Complaint, now on file, and upon considering the affidavits of Robert Rex Downie and Phillip E. Siggers, and the exhibits referred to in the said affidavits and filed herein in support of this motion, and a copy of the opinion and decree of Judge Paul Jones in the case of the Keystone Driller Company vs. The Byers Machine Company and Byers Machine Company, it is ordered:

That the Defendant show cause, if any it has, before this Court, at a session thereof to be held in the City of Toledo, State of Ohio, on the 25th day of February, 1929, at 9:30 o'clock forenoon, or as soon thereafter as counsel can be heard, why a preliminary injunction should not issue pursuant to the prayer of said Bill of Complaint;

That copies of the said Bill of Complaint and of Plaintiff's motion papers and affidavits be served upon Defendant with this order;

That Defendant serve copies of all papers proposed to be used in opposition to the motion for a preliminary injunction upon Plaintiff's solicitors, Richey & Watts, 766 Union Trust Bldg., Cleveland, Ohio, by leaving said copies at said office or by mailing them by registered mail so as to reach said office at or before 4:00 P. M., February 18th, 1929;

And that Plaintiff serve copies of all papers in rebuttal upon Defendant, not later than the second day preceding the above named return day of this order;

That service of copies of this order and the attached affidavits upon counsel for Defendant on or before the 11th day of February, 1929, be deemed sufficient service.

GEO. P. HAHN,

United States District Judge.

Toledo, Ohio, February 9th, 1929.

ORDER MODIFYING THE DATES IN THE ORDER TO SHOW CAUSE.

(Entered Feb. 18, 1929 by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby ordered that the Defendant's time for serving copies of all papers proposed to be used in opposition to the Motion for a Preliminary Injunction upon Plaintiff's solicitors, Richey & Watts, 766 Union Trust Bldg., Cleveland, Ohio, by leaving said copies at said office or mailing them by registered mail so as to reach said office, be extended to 4:00 P. M., February 25, 1929; the time for serving copies of Plaintiff's rebuttal papers be extended until March 5, 1929 and the hearing which is now set for the 25th day of February upon the Motion for a Preliminary Injunction be postponed until March 8, 1929.

GEO. P. HAHN,
United States District Judge.

We assent to the entry of the above order.

RICHEY & WATTS,
Solicitors for Plaintiff.

FRASER, HIETT, WALL & EFFLER,
Solicitors for Defendant.

ORDER EXTENDING TIME FOR SERVING COPIES OF ORDER.

(Entered Feb. 21, 1929 by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby ordered that the defendant's time for serving copies of all papers proposed to be used in opposition to the motion for a preliminary injunction, upon plaintiff's solicitors, Richey & Watts, 766 Union Trust Building, Cleveland, Ohio, by leaving said copies at said

office or mailing them by registered mail so as to reach said office, be extended to 4:00 P. M. March 11, 1929; the time for serving copies of plaintiff's rebuttal papers be extended until March 19, 1929; and the hearing which is now set for the 28th day of March upon the motion for a preliminary injunction be postponed until March 22, 1929.

GEO. P. HAHN,
United States District Judge.

Dated February 20, 1929.

Approved as to form.
GEO. E. KIRK,
by WM. O. BALLARD.

DEFENDANT'S ANSWERS TO PLAINTIFF'S INTERROGATORIES.

(Filed Feb. 25, 1929.)

[Case No. 964]

Now comes the Defendant, by Edgar W. Barnhart, Plant Manager for the Defendant Company, and answers the Interrogatories propounded by the Plaintiff, as follows:

(1) Yes. (See answer to Interrogatory No. 4).
(2) Yes.
(3) Yes.
(4) No. Bulletin No. 2703 of Exhibit No. 1 was issued by the Defendant Company prior to the building of any backhoe or ditcher attachment and the sketch appearing in the upper right hand corner of page 11 of Exhibit 1 does not correctly represent any backhoe or ditcher attachment which has been built or sold by the Defendant Company.
(5) The General Excavator Company made, used and/or sold at Marion, Ohio, and elsewhere in the North-

ern District of Ohio, Western Division, between June 23, 1925 and February 7, 1929 the "backhoes" illustrated on pages one, two, nine, ten and eleven of bulletin 2805 and described on pages eight and nine of the same bulletin, which is Exhibit 2; the sketch shown in the upper right hand corner of page nineteen of said Bulletin 2805 illustrates the general construction of the backhoe attachment sold by The General Excavator Company but is not a scale drawing and cannot be relied upon as correctly illustrating the details and dimensions of said backhoe attachment.

(6) Yes.

STATE OF OHIO,
COUNTY OF MARION, SS.

Edgar W. Barnhart, being duly sworn, says that he is Plant Manager of The General Excavator Company, the Defendant in the above entitled cause; that he has personal knowledge of the facts set forth in the foregoing answers to Plaintiff's Interrogatories and that said answers are true to his own knowledge.

EDGAR W. BARNHART.

Subscribed and sworn to before me, a notary public, on this 21st day of February, 1929.

CARROLL B. KERR,

(Seal) *Notary Public in and for Marion County, State of Ohio.*

STIPULATION EXTENDING TIME TO ANSWER.

(Filed Feb. 28, 1929.)

[Case No. 964]

It is hereby stipulated by and between counsel for the respective parties to the above entitled cause, subject to the approval of the Court, that the time within which

defendant may file its answer to the bill of complaint be and the same hereby is extended for thirty (30) days from the date now set, that is to and including the 30th day of March, 1929.

RICHEY & WATTS,
Solicitors for Plaintiff.
EDWARD L. REED,
Solicitor for Defendant.

It is so ordered:

GEO. P. HAHN, *Judge.*
February 28, 1929.

ORDER MODIFYING DATES IN ORDER TO SHOW CAUSE.

(Entered March 9, 1929, by Geo. P. Hahn, Judge.)

[Case No. 964]

Upon application of the defendant it is hereby ordered that the defendant's time for serving copies of all papers proposed to be used in opposition to the motion for a preliminary injunction, upon plaintiff's solicitors, Richey & Watts, 766 Union Trust Building, Cleveland, Ohio, by leaving said copies at said office or mailing them by registered mail so as to reach said office, be extended to 4:00 P. M., March 25, 1929; the time for serving copies of plaintiff's rebuttal papers be extended until April 2, 1929; and the hearing which is now set for the 28th day of March upon the motion for a preliminary injunction be postponed until April 8, 1929.

GEO. P. HAHN,
United States District Judge.

Dated March 9, 1929.

Approved as to form:

GEO. E. KIRK,
By WM. O. BALLARD.

STIPULATION EXTENDING TIME FOR FILING PAPERS.

(Filed March 28, 1929.)

[Case No. 964]

It is stipulated by and between the parties hereto that the time now running for Plaintiff to serve rebuttal papers be extended from April 2, 1929, to April 16, 1929, and that the hearing on Motion for Preliminary Injunction now set for April 8, 1929, be set for April 22, 1929.

GEO. E. KIRK,
Of Counsel for Plaintiff.

FRASER, HIETT, WALL & EFFLER,
Of Counsel for Defendant.

Toledo, Ohio, March 28, 1929.

ORDER MODIFYING DATES IN ORDER TO SHOW CAUSE.

(Entered March 28, 1929, by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby ordered that the plaintiff's time for serving copies of rebuttal papers proposed to be used in the matter of the motion for a preliminary injunction be extended from April 2, 1929, to April 16, 1929, and the hearing which is now set for the 8th of April, 1929, upon the motion for a preliminary injunction be postponed until April 22, 1929.

GEO. P. HAHN,
United States District Judge.

March 28, 1929.

Approved as to form:

FRASER, HIETT, WALL & EFFLER,
Of Counsel for Defendant.

DEFENDANT'S ANSWER.

(Filed Mar. 29, 1929.)

[Case No. 964]

The answer of the defendant, The General Excavator Company, to the bill of complaint herein.

This defendant, now and at all times hereafter, saving and reserving to itself all and all manner of benefit and advantage of exception or otherwise that can or may be had or taken to the manifold errors, uncertainties, imperfections and insufficiencies in said bill of complaint contained, for answer thereto, or unto so much and such parts thereof as it is advised it is material for it to make answer to, answering, says:

1. Defendant denies each and every allegation in said bill of complaint contained, except such as are hereinafter admitted or specifically answered or denied.

2. Defendant leaves plaintiff to make such proof of the allegations contained in paragraph I of the bill of complaint as it may deem proper.

3. Defendant admits that this cause is based on the alleged infringement of United States patents and that defendant is an inhabitant of the State of Ohio, in the Northern District of Ohio, Western Division, where it has a place of business, but denies that it has committed acts of infringement in said district or elsewhere.

4. Defendant admits that United States patent No. 1,317,431 was issued to LeRoy P. Clutter on an application filed on February 11, 1915, for alleged improvements in Ditching and Excavating Machines, as set forth in paragraphs III and IV of said bill of complaint, but denies that, on or prior to February 11, 1915, said LeRoy P. Clutter was the original, first and true inventor of the alleged improvements in Ditching and Excavating Machines set forth in said patent; denies that said alleged improvements were not known or used by others in this country before his invention or discovery thereof; denies that said alleged improvements were not patented or described in any publication in this or any foreign country before his invention or discovery thereof or more than two years prior to said application for patent; denies that said alleged improvements were not in public use or on sale in the United States for more than two years prior to said application; denies that said alleged improvements were not abandoned prior to said applica-

tion; denies that in securing said patent said Clutter complied in all respects with the conditions and requirements of the then existing laws of the United States; denies that said patent was issued in due form of law and in accordance with all requirements of the law; and denies the remaining allegations of said paragraphs.

5. Defendant is not informed regarding the alleged assignment of said patent No. 1,317,431 by said Clutter to the plaintiff, as set forth in paragraph V of said bill of complaint, and therefore denies the same and demands strict proof thereof.

6. Defendant admits that United States patent No. 1,511,114, for alleged improvements in Excavating Machines, was issued to the plaintiff on an application filed by Robert Rex Downie on June 27, 1921, as set forth in paragraphs VI and VIII of said bill of complaint, but denies that said Robert Rex Downie was at the time of the filing of said application, or prior thereto, the original, first and true inventor of the alleged improvements in Excavating Machines set forth in said patent No. 1,511,114, or any part thereof; denies that said alleged improvements were not known or used by others in this country before his invention or discovery thereof; denies that said alleged improvements were not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to said application for United States patent; denies that said alleged improvements were not in public use or on sale in the United States for more than two years prior to said application; denies that said improvements were not abandoned to the public; denies that in securing said patent said Robert Rex Downie and plaintiff complied in all respects with the conditions and requirements of the then existing laws of the United States; denies that said Letters Patent were issued in due form of law and in accordance with all requirements of law; and denies the remaining allegations of said paragraphs.

7. Defendant is not informed as to the execution or sufficiency of the alleged assignment by Robert Rex Downie to the plaintiff, of said invention, as set forth in paragraph VII of said bill of complaint, and therefore denies the same and demands strict proof thereof.

8. Defendant admits that Letters Patent of the United States No. 1,543,250, for alleged improvements in

Excavating Machines, were issued on the 23rd day of June, 1925 to the plaintiff on an application of Robert Rex Downie filed January 8, 1925; as set forth in paragraphs IX and XI of the bill of complaint, but denies that said Robert Rex Downie was, at the time of the filing of said application for patent, or prior thereto, the original, first and true inventor of the alleged improvements set forth in said patent No. 1,543,250, or any part thereof; denies that said alleged improvements were not known or used by others in this country before his invention or discovery thereof; denies that said improvements were not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to said application for patent; denies that said alleged improvements were not in public use or on sale in the United States for more than two years prior to said application; denies that said alleged improvements were not abandoned to the public; denies that in the securing of said patent said Robert Rex Downie and plaintiff complied in all respects with the then existing laws of the United States; denies that said Letters Patent were issued in due form of law and in accordance with all the requirements of law; and denies the remaining allegations of said paragraphs.

9. Defendant is not informed as to the execution or sufficiency of the alleged assignment by said Downie to the plaintiff, of the alleged invention embodied in said application of January 8, 1925, as set forth in paragraph X of said bill of complaint, and therefore denies the same and demands strict proof thereof.

10. Defendant, answering paragraph XII of the bill of complaint, says that it is not informed as to whether or not plaintiff at any time became, or was at the time of filing said bill of complaint, the sole owner of said patents Nos. 1,317,431, 1,511,114, and 1,543,250, or of any rights thereunder, and therefore denies the same and demands strict proof thereof.

11. Defendant, answering paragraph XIII of the bill of complaint, admits that plaintiff is engaged in the manufacture and sale of excavating machines, but says it is not informed as to whether or not said excavating machines embody the inventions of the aforesaid patents, or any part thereof, or as to whether or not said alleged inventions, or any of them, are of great utility and value or have come extensively into public use with substantial

benefits to the public and to the plaintiff, or whether or not plaintiff has been to large effort and expense in and about said inventions for the purpose of introducing them into use and supplying embodiments thereof, and therefore denies the same; and denies that the business of the plaintiff in this connection is now threatened with irreparable injury, or any injury, by any act of the defendant.

12. Defendant, answering paragraph XIV of the bill of complaint, admits that suit was brought by the plaintiff herein against the Byers Machine Company but says that it is not informed as to the several allegations relating thereto and in said paragraph contained, and therefore denies the same, and denies that the decree attached to the bill of complaint is a true copy of the decree entered in said case.

13. Defendant, answering paragraph XV of the bill of complaint, denies that it has, since the issuance of patents Nos. 1,317,431, 1,511,114 and 1,543,250, or any of them, and since the alleged title to and rights under said patents, or any of them, were acquired by plaintiff, and within six years next preceding the filing of this bill of complaint, or at any other time, in defiance of said patents, or any of them, or in defiance of plaintiff's rights thereunder, made and/or caused to be made, or has used or sold, or is now making, using or selling within the Northern District of Ohio, Western Division, or elsewhere, Excavating Machines embodying the aforesaid alleged inventions and in infringement of the aforesaid patents, or any of them.

14. Defendant, answering paragraph XVI of said bill of complaint, denies that it has derived or is deriving any unlawful gains or profits from such alleged infringement; denies that plaintiff has suffered and is threatened with irreparable damage, or any damage, by reason of such alleged infringement; denies that it threatens to do or to continue any act in violation of any right which plaintiff may have under said patents, or any of them; denies that any act by it has impaired plaintiff's enjoyment of any exclusive right or privilege granted to the plaintiff by the issuance of said Letters Patent, or any of them; and denies that it has unjustly deprived plaintiff of any profit which it would have realized or enjoyed from said alleged inventions except for such alleged infringement.

15. Defendant, answering paragraph XVII of the bill of complaint, denies that the aforesaid patents are susceptible of conjoint embodiment and use in one and the same construction; and denies that they have been so conjointly embodied and used in the machines made and sold by the defendant.

16. Defendant, answering paragraph XVIII of the bill of complaint, says that it is not informed as to whether or not plaintiff has given notice to the public that its machines are patented by affixing thereon the word "Patented" together with the date and year each of the aforesaid patents were granted, and therefore denies the same.

17. Defendant, further answering, denies that the subject matter attempted to be claimed and covered by the patents sued on, or any of them, constitutes patentable subject matter or involves any act of invention, and avers that the subjects matter of said patents, and of each of them, embodies nothing more than the work of a mechanic in selecting and putting together the most desirable parts of machines well known in the art prior to the respective applications for said patents.

18. Defendant, further answering, avers that said Letters Patent sued on, and each of them, are null and void because the alleged inventors thereof were not the original, and first inventors or discoverers of the alleged improvements embraced in the respective patents, or any material and substantial part thereof, but that the said alleged improvements and each of them, were invented by others before the alleged dates of invention by said Clutter and said Downie.

19. Defendant, further answering, avers that the Letters Patent sued on, and each of them, and all the claims in suit, are null and void because the alleged inventions or discoveries embodied in said patents, and each of them, and attempted to be covered thereby, or the material and substantial parts thereof, had, prior to the alleged inventions thereof by said patentees, LeRoy P. Clutter and Robert Rex Downie, been described, disclosed, illustrated, published and patented by various persons as set forth in the following Letters Patent:

Number	*Inventor.*	*Date*
77,949	Barnes	May 19, 1868
386,438	Rood	July 17, 1888
418,311	Cross	Dec. 31, 1889

427,260	Forter	May 6, 1890
496,428	Morgan	May 2, 1893
519,835	Butler	May 15, 1894
629,695	Knight	July 25, 1899
670,210	Shannon	Mar. 19, 1901
711,449	Williams	Oct. 14, 1902
716,538	Harrison	Dec. 23, 1902
745,329	Coffey	Dec. 1, 1903
806,288	Pugh	Dec. 5, 1905
808,345	Cross	Dec. 26, 1905
876,517	Bendick	Jan. 14, 1908
892,508	Fairbanks	July 7, 1908
1,056,268	Fairbanks	Mar. 18, 1913
1,100,864	Bishop	June 23, 1914
1,194,204	Mahoney	Aug. 8, 1916
1,237,878	Downie	Aug. 21, 1917
1,237,879	Downie	Aug. 21, 1917
1,249,805	Morison et al.	Dec. 11, 1917
1,281,379	Hudson	Oct. 15, 1918
1,283,460	Bentson	Nov. 5, 1918
1,289,395	Clutter	Dec. 31, 1918
1,315,512	Keith	Sep. 9, 1919
1,316,058	Pugh	Sep. 16, 1919
1,317,431	Clutter	Sep. 30, 1919
1,322,570	Hoar	Nov. 25, 1919
1,385,322	Hoffmeyer	July 19, 1921
Re. 15,685	Hoar	Sep. 18, 1923
1,476,121	Wagner et al.	Dec. 4, 1923
1,485,198	Pugh	Feb. 26, 1924
1,503,813	Burke	Aug. 5, 1924
1,515,783	Luce	Nov. 18, 1924
1,562,288	Burke	Nov. 17, 1925

Defendant begs leave to insert herein, by way of amendment, the names and dates of other prior patents or publications and suitable information in connection with prior users, as such patents, publications and information may be discovered and promptly pleaded herein by way of amended answer.

20. Defendant, further answering, avers that the Letters Patent sued on, and each of them, are null and void, because prior to the alleged inventions of said LeRoy P. Clutter and said Robert Rex Downie, respectively, the alleged improvements described and claimed in said patents, or the material and substantial parts thereof, were known and used by the following named persons at the following named places, to wit:

Daniel H. Mahoney, now of North Bend, Ohio, at Vincennes, Indiana, and elsewhere.

E. O. Rood, deceased, and Charles W. Rood, of Orlando, Florida.

21. Defendant, further answering, avers that plaintiff has been guilty of laches in instituting this suit; that plaintiff has had knowledge of its alleged rights and has had ample opportunity to establish them in the proper forum; that by reason of its delay defendant has had good reason to believe that the alleged rights were worthless or abandoned; and that in consequence thereof defendant invested large sums in its business and has established a substantial trade in the excavating machines involved herein, and that because of this change in condition during this period of delay it would be an injustice to permit plaintiff to now assert these alleged rights; wherefore defendant prays that this suit be dismissed.

22. Defendant, further answering, denies that it has in any way or in any manner trespassed upon the plaintiff's lawful rights in the premises, and denies that the plaintiff is entitled to any relief against defendant by way of injunction or otherwise or to any accounting or any other equitable relief against it.

All of which matters and things defendant will maintain and prove and prays to be hence dismissed with its reasonable costs sustained.

EDWARD L. REED,
Solicitor for Defendant.

HAROLD W. FRASER,
Of Counsel.

STIPULATION RE USE OF UNCERTIFIED COPIES OF PATENTS ETC. AT TRIAL.

(Filed April 15, 1929.)

[Case No. 964]

It is hereby stipulated and agreed by the parties to the above suit as follows:

(1) The Plaintiff is a Pennsylvania corporation, having its principal place of business at Beaver Falls, Pennsylvania, and a citizen and inhabitant of said State as pleaded in the Bill of Complaint.

(2) Uncertified printed copies of United States or foreign patents (and where printed copies cannot conveniently be secured, uncertified photostatic or similar copies of United States and foreign patents) may be used with the same force and effect in this case as original or certified copies.

(3) Uncertified copies of publications may be accepted in the above entitled case with the same force and effect as certified copies, or the originals, and the dates of the issue and publication of said publications appearing thereon will be accepted as correct, subject to correction if error occur. Each side agrees to furnish the other with copies of publications which it relies upon and to advise the other where the originals may be found.

(4) Exhibits offered in the case may be retained in the possession of the party first producing them subject to inspection by the other party, or the counsel of the other party, upon reasonable notice to the party retaining the exhibits. Such exhibits, however, shall be filed prior to the final hearing in the case or shall be filed at any time therebefore upon the request of opposing counsel.

(5) Each party agrees to furnish copies of all depositions taken by such party in the case to the other party without charge.

RICHEY & WATTS,
Attorneys for Plaintiff.

EDWARD L. REED,
Attorney for Defendant.

Dayton, Ohio, April 8, 1929.
Cleveland, Ohio, April 13, 1929.

MEMORANDUM OPINION OF COURT UPON MOTION FOR PRELIMINARY INJUNCTION.

(Filed April 25, 1929.)

[Case No. 964]

HAHN, *J.*:

We have heard extended arguments of counsel urging that a temporary injunction be granted in this proceeding enjoining the defendant from using the patents involved in this litigation pending final hearing. We have read the briefs and the affidavits submitted. Our analysis of the situation would not be of any value to counsel who are thoroughly familiar with the case.

Our conclusion is that, while plaintiff has sustained its patents as against the defenses of an alleged impecunious infringer in a suit which was decided in its favor by Judge Paul Jones, the defendant here is in good faith pressing new defenses which, to say the least, seem to have merit enough to prevent the application of the rule permitting a temporary injunction to plaintiff merely because of the prior adjudication in its favor. Accordingly, we think that, having in mind the decisions of our Circuit Court of Appeals, particularly *Toledo Plate & Window Glass Co., v. Kawneer Mfg. Co.*, 262 Fed. 510, and cases therein cited, the proper course to pursue in this matter is to deny the motion for a temporary injunction, upon condition that the defendant file in this action an appropriate bond payable to the plaintiff, and covering damages which may accrue to the plaintiff from and after the 22nd day of April, 1929. If counsel cannot agree upon the amount of the bond, the court will hear further from counsel. If the defendant refuses to put up a bond, then the plaintiff may have a temporary injunction on giving the usual bond. If counsel cannot agree upon the amount of such bond, the matter may be further submitted to the court.

GEO. P. HAHN,
Judge.

April 25, 1929.

ORDER DENYING MOTION FOR PRELIMINARY INJUNCTION.

(Entered June 12, 1929 by Geo. P. Hahn, Judge.)

[Case No. 964]

The plaintiff's motion for preliminary injunction in the above-entitled cause having come on to be heard on the 22nd day of April, 1929, upon affidavits and exhibits filed by the plaintiff and the defendant, and having been argued by counsel for the respective parties, and the Court having fully considered the same, it is hereby,

ORDERED, that the said motion for a preliminary injunction be and the same hereby is denied; upon condition that the defendant give to the plaintiff a bond in the sum of Fifteen Thousand ($15,000.00) Dollars conditioned for the payment of all profits or damages that may be decreed against the defendant in this cause for the infringement of the patents sued on (between the date of this order and the final decree); and it is further Ordered that if the defendant refuses to put up a bond, then the plaintiff may have a temporary injunction on giving the usual bond.

GEO. P. HAHN,

June 12, 1929. *United States District Judge.*

Approved as to form June 8, 1929.

EDWARD L. REED,

Attorney for Defendant.

BOND OF DEFENDANT FOR $15,000, IN LIEU OF PRELIMINARY INJUNCTION.

(Filed June 12, 1929.)

[Case No. 964]

UNITED STATES OF AMERICA,
NORTHERN DISTRICT OF OHIO,
WESTERN DIVISION, SS.:

KNOW ALL MEN BY THESE PRESENTS, that we, The General Excavator Company, of Marion in the County of Marion, and State of Ohio, as principal, and Ameri-

can Surety Company of New York of the City of New York and State of New York, as surety, are held and firmly bound unto Keystone Driller Company in the sum of Fifteen Thousand ($15,000.00) Dollars, lawful money of the United States, to be paid to said Keystone Driller Company, its successors or assigns; to which payment, well and truly to be made, we bind ourselves and each of us, jointly and severally, and each of our successors and assigns, by these presents.

Sealed with our seals and dated this 10th day of June, 1929.

WHEREAS, the above named Keystone Driller Company, plaintiff in this cause, has presented to the court its motion for a preliminary injunction, which motion has been denied upon the condition that defendant, The General Excavator Company, file in this cause an appropriate bond payable to the plaintiff, and covering damages which may accrue to the plaintiff from and after the 22nd day of April, 1929.

NOW, THEREFORE, the condition of this obligation is such that, if the said The General Excavator Company shall pay to said Keystone Driller Company all profits or damages which may be decreed against said The General Excavator Company, in this cause, for infringement of the patents included in the bill of complaint in said cause between the 22nd day of April, 1929, and the date of the final decree in said cause, then these presents and this obligation shall be void; otherwise they shall remain in full force and effect.

THE GENERAL EXCAVATOR COMPANY,
By C. A. OWENS,
Secretary.

AMERICAN SURETY COMPANY OF NEW YORK,
By FRED J. KINSEY,
Resident Vice President,
Attest: J. M. SCHRADER,
Resident Asst. Secretary
at Toledo, Ohio.
(Surety Co. Seal)

Approved: GEO. P. HAHN,
United States District Judge.

STIPULATION IN RE TIME FOR TAKING DEPOSITIONS.

(Filed June 13, 1929.)

[Case No. 964]

It is hereby stipulated and agreed by and between counsel for the respective parties, subject to the approval and order of the Court, that the time for taking depositions of the parties under the provisions of Rule 47, shall be and the same hereby is extended as follows: The time for plaintiff's depositions to close on August 23, 1929 and the time for defendant's depositions to close on September 22, 1929, and the time for rebutting depositions by either party to close on October 12, 1929.

PHILIP E. SIGGERS,

June 10, 1929. *Attorney for Plaintiff.*

EDWARD L. REED,

June 12, 1929. *Attorney for Defendant.*

SUPPLEMENTAL BILL OF COMPLAINT.

(Filed Aug. 9, 1929.)

[Case No. 964]

To the Honorable, the Judges of the District Court of the United States for the Northern District of Ohio, Western Division:

Keystone Driller Company, a corporation of the State of Pennsylvania, having its principal place of business at Beaver Falls, Pennsylvania, presents the following Supplemental Bill of Complaint against The General Excavator Company, a corporation organized and existing under the laws of the State of Ohio, and having a regular and established place of business at Marion, Marion County, Ohio, and thereupon plaintiff complains and alleges:

(I) That on February 9, 1929, Keystone Driller Company, Plaintiff, exhibited its original Bill of Complaint to this Honorable Court against The General Excavator Company in which Plaintiff stated that the Defendant was infringing, and threatening infringement of, Letters Patent of the United States, Nos. 1,317,431, 1,511,114 and 1,543,250 and seeking relief from such infringement and threatened infringement.

(II) That said Bill of Complaint recited the invention by LeRoy P. Clutter and Robert Rex Downie of certain new and useful improvements in excavating machines and of the filing of applications thereon for United States patents named above which subsequently issued therefrom the infringement and threatened infringement thereof by The General Excavator Company, and other matters as set forth in said Bill of Complaint.

(III) That subsequent to the filing of said Bill of Complaint there has issued to the Plaintiff, Keystone Driller Company, United States Patents Nos. 1,709,466 and 1,716,432, infringement and threatened infringement by The General Excavator Company of which is complained of in this Supplemental Bill of Complaint.

(IV) On and prior to January 3, 1927, Robert Rex Downie, a citizen of the United States, then residing at Beaver Falls, Pennsylvania, was the original, first and true inventor of new and useful improvements in Ditcher Scoop Assembly, not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his hereinafter mentioned application for patent therefor in the United States, and not in public use or on sale in the United States for more than two years prior to said application, and not by him abandoned to the public, and not first patented or caused to be patented by him or his legal representatives or assigns, in any foreign country upon an application filed more than twelve months prior to the filing of said application in the United States. So being the original, first and true inventor, as aforesaid, said Robert Rex Downie, on January 3, 1927, made application to the Commissioner of Patents of the United States for a patent for his said invention, in accordance with the then existing laws of the United States, and complied in all respects with the conditions and requirements of said laws.

(V) For good and valuable consideration, by an instrument in writing executed and recorded in the Patent Office before the grant of a patent on his said application of January 3, 1927, the said Robert Rex Downie assigned to plaintiff the whole right, title and interest in and to his said invention and authorized the Commissioner of Patents to issue the patent for said invention to the plaintiff.

(VI) Upon said application of Robert Rex Downie, and pursuant to his said assignment to plaintiff, due proceedings were had, in accordance with all requirements of law, such that on April 16, 1929, United States patent No. 1,709,466, signed, sealed and executed in due form of law, was issued to plaintiff for said invention or improvements in Ditcher Scoop Assembly. And plaintiff brings here into court a copy of said patent No. 1,709,466 and prays that the same may be taken as part of this Bill of Complaint.

(VII) On and prior to May 22, 1926, Robert Rex Downie, a citizen of the United States, then residing at Beaver Falls, Pennsylvania, was the original, first and true inventor of certain new and useful improvements in Excavating Scoop, not known or used by others in this country before his invention or discovery thereof, not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his hereinafter mentioned application for patent therefor in the United States, and not in public use or on sale in the United States for more than two years prior to said application, and not by him abandoned to the public, and not first patented or caused to be patented by him or his legal representatives or assigns in any foreign country upon an application filed more than twelve months prior to the filing of said application in the United States. So being the original, first and true inventor, as aforesaid, said Robert Rex Downie, on May 22, 1926, made application to the Commissioner of Patents of the United States for a patent on his said invention, in accordance with the then existing laws of the United States, and complied in all respects with said laws.

(VIII) For good and valuable consideration by an instrument in writing executed and recorded in the Patent Office before the grant of a patent on his said application of May 22, 1926, the said Robert Rex Downie assigned to plaintiff the whole right, title and interest in and to his said invention set forth in the application last

mentioned, and authorized the Commissioner of Patents to issue the patent therefor to the plaintiff.

(IX) Upon said Robert Rex Downie's said application of May 22, 1926, and pursuant to his assignment to plaintiff of the invention described therein, due proceedings were had, in accordance with all requirements of law, such that on June 11, 1929, United States Patent No. 1,716,432, signed, sealed and executed in due form of law, was issued to plaintiff for said invention or improvements in Excavating Scoop. And plaintiff brings here into court a copy of said Patent No. 1,716,432 and prays that the same may be taken as part of this Bill of Complaint.

(X) By reason of the premises, prior to the filing of this Bill of Complaint, and prior to the acts of infringement hereinafter complained of, plaintiff became and has ever since remained and now is the sole owner of said patents Nos. 1,709,466 and 1,716,432 and of all rights thereunder.

(XI) Under the protection of the aforesaid patents, plaintiff is engaged in the manufacture and sale of Excavating Machines embodying said inventions. Said inventions of said patents and each of them are of great utility and value, and have come extensively into public use, with substantial benefits to the public and to the plaintiff. The plaintiff has been to large effort and expense in and about said inventions for the purpose of introducing them into use and supplying embodiments thereof. Its business in this connection is now threatened with irreparable injury by the acts of defendant hereinafter complained of.

(XII) Since the respective dates of issue of said patents Nos. 1,709,466 and 1,716,432 and since the plaintiff acquired its title to and rights under said patents as hereinbefore recited, and within six years next preceding the filing of this Bill of Complaint, and without leave of or license from plaintiff, and in defiance of said patents and each of them and of plaintiff's rights thereunder, the said The General Excavator Company has made and/or caused to be made and has used and has sold, and is now making, using and selling, within said Northern District of Ohio, Western Division, and elsewhere within the United States of America, numerous excavating machines embodying the inventions described and claimed in and patented by said patents Nos. 1,709,466 and 1,716,432, and each of them, in infringement of said patents and

each of them, and defendant threatens to continue to infringe each of said patents.

(XIII) Defendant has derived and continues to derive unlawful gains and profits from said infringement, and plaintiff has suffered and is threatened with irreparable damage by reason of said infringement. Defendant threatens to continue all of said acts above complained of. Defendant by its acts aforesaid has impaired plaintiff's enjoyment of its exclusive rights and privileges granted upon issue of said letters patent, and each of them, and has unjustly deprived plaintiff of large profits, which it would have realized and enjoyed from said inventions except for defendant's infringement.

(XIV) The inventions of the aforesaid patents are susceptible of conjoint embodiment and use in one and the same construction both with each other and with the inventions of the patents set forth in the original Bill of Complaint, and have been so conjointly embodied and used in the machines made and sold by defendant as aforesaid.

(XV) Plaintiff has specially notified defendant of each of said patents and of plaintiff's ownership thereof and of the infringements complained of, but said defendant has continued and will unless restrained continue its acts complained of notwithstanding and in spite of said notice.

WHEREFORE plaintiff prays:

(a) That the defendant, The General Excavator Company, be directed to appear and answer this Bill of Complaint (but not under oath, answer under oath being expressly waived), and to abide by and perform such orders and decrees as the court may deem proper.

(b) That the defendant, The General Excavator Company, and its officers, agents, servants, employees, and all persons in privity with them and each of them, be enjoined and restrained *pendente lite*, by decree and injunction of this court, from directly or contributorily infringing plaintiff's said patents Nos. 1,709,466 and 1,716,432, and each of them and from threatening to infringe the same.

(c) That the defendant, The General Excavator Company, and its officers, agents, servants, employees, and all persons in privity with them, and each of them, be enjoined and restrained perpetually,

by decree and injunction of this court, from directly or contributorily infringing plaintiff's said patents Nos. 1,709,466 and 1,716,432 and each of them and from threatening to infringe the same.

(d) That the defendant, The General Excavator Company, be required to account to plaintiff for the profits realized by defendant and the damages to plaintiff in the premises; and that this cause be referred to a Master to take an accounting of said profits and damages; and that such damages be increased to three times the amount thereof or as to the Court may seem meet in view of all the circumstances.

(e) That said defendant be decreed to pay the costs and disbursements of this suit to be taxed.

(f) And that plaintiff have such other and further relief as to the court may seem meet.

KEYSTONE DRILLER COMPANY,
ROBERT REX DOWNIE,
Secretary.

RICHEY & WATTS, *Solicitor,*
P. E. SIGGERS, *Solicitor,*
Of Counsel.

Verification.

STATE OF PENNSYLVANIA,
COUNTY OF BEAVER, SS.

Robert Rex Downie, being duly sworn, deposes and says that he is Secretary of the corporation, Keystone Driller Company, the plaintiff named in the foregoing Supplemental Bill of Complaint; that he has read this Bill; that insofar as the statements contained in this Bill are within his knowledge they are true, and so far as they are derived from information and belief, he verily believes them to be true.

ROBERT REX DOWNIE.

Subscribed and sworn to before me this 5th day of Aug., 1929.

CHAS. THEO. SMITH,
(Seal) *Notary Public.*

Commission expires March 13, 1931.

Service of Copy accepted this 9th day of August, 1929.

H. W. FRASER,
Of Counsel for Defendant.

PRINTER'S NOTE:

Copies of U. S. Patents Nos. 1,709,466 and 1,716,432 to R. R. Downie were attached to this Supplemental Bill of Complaint but same have been omitted at this point as they are also a part of Defendant's Exhibit No. 62, Book of Patents.

ORDER GRANTING LEAVE TO FILE SUPPLEMENTAL BILL OF COMPLAINT.

(Entered August 23, 1929, by S. H. West, Judge.)

[Case No. 964]

It is hereby ordered that the plaintiff be permitted to file its Supplemental Bill of Complaint with respect to United States Letters Patents to Downie, Nos. 1,709,466 and 1,716,432. Defendant's time to answer shall run from the date on which this order is entered.

S. H. WEST,
United States District Judge.

Signed by Judge West at Cleveland, O., 8/22/29.

F.O.R.

We assent to the entry of the above Order.

RICHEY & WATTS,
Counsel for Plaintiff.

EDWARD L. REED,
Counsel for Defendant.

Aug. 21, 1929.

ORDER ALLOWING DEFENDANT EXTENSION OF TIME TO ANSWER SUPPLEMENTAL BILL OF COMPLAINT.

(Entered Sept. 9, 1929, by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby ordered that the time within which the defendant may answer the supplemental bill of complaint herein be, and the same hereby is, extended for thirty days, that is, to and including the 11th day of October, 1929.

GEO. P. HAHN,
District Judge.

ORDER PERMITTING THE GENERAL EXCAVATOR COMPANY AND THE OSGOOD COMPANY TO TAKE DEPOSITIONS.

(Entered Sept. 9, 1929, by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby ordered:

1. That The General Excavator Company, and The Osgood Company, defendants in Equity Cases 964 and 965, respectively, now pending in this Court, may take jointly any and all depositions allowed by statute or the United States Equity Rules, such depositions so taken to be entitled in both of said cases, and a separate copy of any and all depositions so taken, with exhibits, to be filed in each case, provided that when the original ink copy of any said depositions and original Exhibits are filed in one case a carbon copy of said depositions and copies of said original Exhibit may be filed in the other case subject to comparison with the original deposition and original exhibits and subject to correction if any error or discrepancy be found.

2. That any and all depositions so taken may be read on the trial of either or both of said cases the same as if the said depositions had been taken by the defendants separately, subject to all exceptions for relevancy.

3. That the said defendants shall serve separate notices of taking testimony upon the Keystone Driller Company or its attorneys and that a separate certificate shall be filed with each deposition in each case by the officer before whom such deposition is taken.

4. That at the taking of said depositions the witnesses may be examined by the attorney for either defendant on behalf of the other defendant, or the attorney for each defendant may examine the witnesses separately as they so desire.

5. That a copy of this order be filed in each of said cases.

GEO. P. HAHN,
District Judge.

STIPULATION RE DEPOSITIONS.

(Filed Sept. 30, 1929.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including October 26, 1929, and both parties' times for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,
Attorneys for Plaintiff.

September 27, 1929.

EDWARD L. REED,
Attorney for Defendant.

September 26, 1929.

ANSWER TO SUPPLEMENTAL BILL OF COMPLAINT.

(Filed Oct. 10, 1929.)

[Case No. 964]

The answer of the defendant, The General Excavator Company, to the supplemental bill of complaint herein.

This defendant, now and at all times hereafter, saving and reserving unto itself all and all manner and benefit and advantage of exception, or otherwise, that can or may be had or taken to the manifold errors, uncertainties, imperfections, and insufficiencies in said supplemental bill of complaint contained, for answer thereto, or unto so much and such parts thereof as it is advised it is material for it to make answer to, answering says:

1. Defendant denies each and every allegation in said supplemental bill of complaint, except such as are hereinafter admitted or specifically answered.

2. Defendant admits that the plaintiff filed its original bill of complaint in this case as set forth in paragraphs I and II of said supplemental bill of complaint.

3. Defendant admits that patents Nos. 1,709,466 and 1,716,432 were issued to the plaintiff herein.

4. Defendant admits that on the 3rd day of January, 1927 Robert Rex Downie made application to the Commissioner of Patents of the United States for patent on certain alleged new and useful improvements in Dipper Scoop Assembly, but denies that said Robert Rex Downie was the original, first and true inventor of said alleged new and useful improvements, denies that said alleged improvements were not known or used by others in this country before said Downie's alleged invention or discovery thereof and not patented or described in any printed publication in this or any foreign country before said Downie's alleged invention or discovery thereof, or more than two years prior to said application for patent and not in public use or on sale in the United States for more than two years prior to said application, and not abandoned by said Downie to the public, and not first patented or caused to be patented by said Downie, or his legal representatives or assigns, in any foreign country upon an application filed more than twelve months prior to the filing of the application in the United States, and denies that said application was made in accordance with the then existing laws of the United States and complied in all respects with the conditions of said laws.

5. Defendant is not informed, except by said supplemental bill of complaint, whether or not for a good and valuable consideration, by an instrument in writing, executed and recorded in the Patent Office, the said Robert Rex Downie assigned to the plaintiff the whole right, title and interest in and to his alleged invention and authorized the Commissioner of Patents to issue the patent for said alleged invention to the plaintiff, and therefore denies the same.

6. Defendant admits that Letters Patent of the United States No. 1,709,466 issued on the aforesaid application but denies that due proceedings were had on said application in accordance with all the requirements of law and denies that said patent was signed, sealed and executed in due form of law.

7. Defendant admits that on the 22nd day of May 1926 Robert Rex Downie made application to the Commissioner of Patents for a patent on certain alleged new and useful improvements in Excavating Scoops, but denies that said application was made in accordance with the then existing laws of the United States and complied in all respects with said laws and further denies that said Robert Rex Downie was the original, first and true inventor of said alleged improvements, and denies that said alleged improvements were not known or used by others in this country before said Downie's alleged invention or discovery thereof, were not patented or described in any printed publication in this or any foreign country before said Downie's alleged invention or discovery thereof, or more than two years prior to his said application for patent thereon, and denies that said alleged improvements were not in public use or on sale in the United States for more than two years prior to said application, and were not abandoned by said Downie to the public and were not first patented or caused to be patented by him or his legal representatives or assigns in any foreign country upon an application filed more than twelve months prior to the filing of said application in the United States.

8. Defendant is not informed as to whether or not for a good and valuable consideration, by an instrument in writing, the said Robert Rex Downie assigned to the plaintiff the whole right, title and interest in and to his alleged invention, as set forth in the application for patent last mentioned, and authorized the Commissioner of Patents to issue the patent therefor to the plaintiff, and therefore denies the same.

9. Defendant admits that United States patent No. 1,716,432 issued on said Robert Rex Downie's application of May 22, 1926 but denies that due proceedings were had on said application in accordance with all the requirements of law and that said patent was signed, sealed and executed in due form of law.

10. For want of information defendant denies that by reason of the premises prior to the filing of this supplemental bill of complaint, or at any other time, plaintiff became and has remained and now is the sole owner of said patents Nos. 1,709,466 and 1,716,432, and of all rights thereunder.

11. Defendant admits that the plaintiff is engaged in the manufacture and sale of Excavating Machines but is not informed as to whether or not said machines embody the alleged inventions of the aforesaid patents or are manufactured and sold under the protection of said patents and therefore denies the same; and further denies that said alleged inventions of said patents, or either of them, are of great utility and value, or have come extensively into public use with substantial benefits to the public and the plaintiff; and further denies that plaintiff has been to large effort and expense in and about said alleged inventions for the purpose of introducing them into use and supplying embodiments thereof; and denies that plaintiff's business in this connection is now threatened with injury by any act of the defendant herein.

12. Defendant denies that it has, in defiance of said patents, or either of them, or of plaintiff's rights thereunder, or otherwise, made and/or caused to be made and used or sold, or is now making, using or selling, within the Northern District of Ohio, Western Division, or elsewhere, Excavating Machines embodying the alleged invention described and claimed in said patents Nos. 1,709,466 and 1,716,432, or either of them, in infringement of said patents, or either of them, and denies that it threatens to infringe or to continue to infringe either of said patents.

13. Defendant denies that it has derived any unlawful gain or profit from any infringement of said patents or that plaintiff has suffered, or is threatened with any damage by reason of any infringement of said patents by the defendant; denies that any act of defendant has impaired the plaintiff's enjoyment of any exclusive right or privilege which may have been granted to it upon the issue of said Letters Patent, or either of them, or has

unjustly deprived plaintiff of any profit which it would otherwise have realized and enjoyed from said invention.

14. Defendant denies that the alleged inventions of the aforesaid patents, are susceptible of conjoint embodiment and use in one and the same construction, both with each other and with the inventions of the patents set forth in the original bill of complaint, and that they have been so conjointly embodied and used in the machines made and sold by defendant.

15. Defendant further answering denies that the subjects matter attempted to be claimed and covered by the aforesaid patents, and each of them, constitutes patentable subject matter or involves any act of invention, and avers that the subjects matter of said patents, and each of them, comprise mere shop expedients and embody nothing more than the work of a mechanic in selecting and putting together the most desirable parts of machines well known in the art prior to the respective applications for said patents.

16. Defendant further answering avers that said Letters Patent sued on, and each of them, are null and void because they do not describe the alleged inventions, as required by law, in such full, clear, concise and exact terms as to enable any person skilled in the art to construct and use the same, and because the claims of said patents, and each of them, do not particularly point out and distinctly claim the part, improvement or combination which the patentee claims as his invention or discovery.

17. Defendant further answering avers that said Letters Patent sued on, and each of them, are null and void because the alleged inventor thereof was not the original and first inventor or discoverer of the alleged improvements embraced in the respective patents, or of any material and substantial parts thereof, but that the alleged improvements, and each of them, were invented by others before the alleged date of invention by said Downie.

18. Defendant further answering avers that the Letters Patent sued on, and each of them, and all the claims in suit, are null and void because the alleged inventions or discoveries embodied in said patents, and in each of them, and attempted to be covered thereby, or the material and substantial parts thereof, had prior to the alleged invention thereof by said Robert Rex Downie,

been described, disclosed, illustrated, published and patented by various persons, as set forth in the following Letters Patent:

Patent No.	*Date of Grant*	*Inventor*
7,340	May 7, 1850	Davis
77,949	May 19, 1868	Barnes
254,563	Mar. 7, 1882	Osgood
477,933	June 28, 1892	Hennebery
493,421	Mar. 14, 1893	Butler
508,685	Nov. 14, 1893	Davy
589,565	Sep. 7, 1897	King
709,733	Sep. 23, 1902	Barton et al.
741,099	Oct. 13, 1903	Bisbee
857,577	June 25, 1907	Becker
892,508	July 7, 1908	Fairbanks
998,029	July 18, 1911	Munn
1,103,476	July 14, 1914	Bishop
1,107,252	Aug. 18, 1914	Black
1,147,432	July 20, 1915	Potter
1,233,574	July 17, 1917	Hemme
1,245,118	Oct. 30, 1917	Moore
1,249,805	Dec. 11, 1917	Morrison et al.
1,265,730	May 14, 1918	Billings
1,315,512	Sep. 9, 1919	Keith
1,340,385	May 18, 1920	Edmondson
1,446,389	Feb. 20, 1923	McGrew
1,485,198	Feb. 26, 1924	Pugh
1,511,114	Oct. 7, 1924	Downie
1,518,314	Dec. 9, 1924	Downie
1,560,136	Nov. 3, 1925	Bentson
1,589,725	Apr. 13, 1926	Harrison
1,648,783	Nov. 8, 1927	Rosselle
1,611,495	Dec. 21, 1926	Jelen

Defendant begs leave to insert herein, by way of amendment, the names, dates and numbers of other prior patents and the identifying data of other publications and such suitable information in connection with prior users, as such patents, publications and information may be discovered and promptly pleaded herein by way of amended answer.

19. Defendant further answering denies that it has in any way or in any manner trespassed upon the plaintiff's lawful rights in the premises and denies that the plaintiff is entitled to any relief against defendant by

way of injunction, or otherwise, or to any accounting or any other equitable relief against it.

All of which matters and things defendant will maintain and prove and prays to be hence dismissed with its reasonable costs sustained.

THE GENERAL EXCAVATOR CO.,
By EDWARD L. REED,
Solicitor for Defendant.

H. W. FRASER,
Of Counsel.

PLAINTIFF'S INTERROGATORIES.

(Filed Oct. 21, 1929.)

[Case No. 964]

Now comes the plaintiff, the Keystone Driller Company, by its attorneys, and within twenty-one (21) days after the filing of defendant's answer to the supplemental bill of complaint, and applies to the Court for an order allowing plaintiff to file interrogatories and directing Mr. C. A. Owens, Secretary, or other officer or employee of defendant company having knowledge of the matters inquired about, to answer the following interrogatories under oath:

(1) Did defendant make, use and/or sell the particular machine pictured in photographs, plaintiff's exhibits 1 to 10 inclusive attached hereto, between June 11, 1929, the date of issue of Letters Patent, No. 1,716,432 here in suit and August 23, 1929, the date of filing of the supplemental bill of complaint. For defendant's information in answering this and subsequent interrogatories plaintiff states that the machine shown in the photographs just mentioned bore the following markings: No. 1323, General Excavator Company, Marion, Ohio, U.S.A., Patented September 26, 1922, 9155, Richards and Gaston, Inc., Somerville, N. J., when the photographs were made at Somerville, N. J., in July, 1929.

(2) If the answer to interrogatory No. 1 is in the negative then did defendant make, use and/or sell, between June 11, 1929 and August 23, 1929 any excavating scoops having teeth secured to the sides thereof like the scoop shown by Nos. 1-3-6-8- and/or 10 of the attached photographs, plaintiff's exhibits 1 to 10 inclusive.

(3) If the answers to interrogatories 1 and/or 2 are in the negative will defendant furnish plaintiff at the time of filing answers to these interrogatories with drawings of all the excavating scoops having teeth secured to the sides thereof which defendant has made, used and/or sold between June 11, 1929 and August 23, 1929.

(4) Did defendant make, use and/or sell the particular machine pictured in the photographs, plaintiff's exhibits 1 to 10 inclusive, attached hereto, between April 16, 1929, the date of issue of Letters Patent No. 1,709,466, here in suit, and August 23, 1929 the date of filing of the supplemental bill of complaint.

(5) If the answer in interrogatory No. 4 is in the negative then did defendant make, use and/or sell between April 16, 1929 and August 23, 1929 any ditcher stick and/or excavating scoop like those shown by Nos. 2-4-5-6-7-8-9 and/or 10 of the attached photographs, plaintiff's exhibits 1 to 10 inclusive.

(6) If the answers to interrogatories 4 and/or 5 are in the negative, will defendant furnish plaintiff, at the time answers to these interrogatories are filed, with drawings of all the ditcher sticks and excavating scoops adapted to be removably assembled together which defendant has made, used and/or sold between April 16, 1929 and August 23, 1929.

The foregoing interrogatories are intended to elicit facts material to plaintiff's case and are in accordance with the provisions of Equity Rule No. 58 and the established practice in the Courts of this District and Circuit.

RICHEY & WATTS,
Attorneys for Plaintiff.

It is hereby ordered that the foregoing interrogatories be filed and that Mr. C. A. Owens, or other officer or employee of the defendant company having knowledge of the facts inquired about make answer to the interrogatories under oath.

GEO. P. HAHN,
U. S. District Judge.

DEFENDANT'S OBJECTIONS TO PLAINTIFF'S INTERROGATORIES.

(Filed Oct. 31, 1929.)

[Case No. 964]

Now comes the defendant, The General Excavator Company, and objects to interrogatories filed by the plaintiff on the 21st day of October, 1929, on the following grounds:

1. The supplemental bill of complaint herein contains a prayer for treble damages. Treble damages constitute a penalty and the defendant cannot be required to furnish evidence against itself in a case involving a penalty.

2. The photographs attached to the interrogatories do not show the construction of the mechanism illustrated therein with sufficient clearness and detail to enable defendant to answer Interrogatories Nos. 1 and 4. The interrogatories contain the statement that the machine shown in the photographs bears the name of the defendant company, together with certain numbers. Even if the defendant did sell a machine bearing the numbers and markings alleged in the interrogatories it does not follow that at the time the photographs were taken the machine was in the same condition as it was when sold by defendant. The backhoe attachment is readily removable from the machine as a whole and the ditcher stick and scoop can be readily removed from the backhoe attachment and replaced. Hence the photographs do not afford sufficient information to enable Interrogatories Nos. 1 and 4 to be answered.

3. The photographs attached to the interrogatories do not show the shape or detail characteristics of the side teeth on the scoop and therefore the information furnished thereby is insufficient to enable Interrogatory No. 2 to be answered. Patent No. 1,716,432 relates to the specific shape of the side teeth and not to the use of side teeth broadly.

4. Interrogatory No. 3 requires defendant to furnish drawings of all excavating scoops having side teeth made, used and/or sold by it during the specified period. Plaintiff is not entitled to information relating to all such devices manufactured and sold by the defendant. This is merely an attempt under the guise of an interrogatory to secure detailed information regarding defendant's product without regard to any question of infringement.

5. Interrogatory No. 5 is objectionable for the same reasons as is Interrogatory No. 2. The photographs attached to the interrogatories show portions only of the ditcher stick and scoop and do not show the construction thereof with sufficient clearness and detail to enable the defendant to answer this interrogatory.

6. Interrogatory No. 6 is objected to on the same ground as is Interrogatory No. 3. It calls for drawings of all ditcher sticks and excavating scoops adapted to be removably assembled which defendant may have made, used or sold during the specified period and plaintiff is not entitled to information as to all devices so made and sold.

THE GENERAL EXCAVATOR COMPANY,
By EDWARD L. REED,
Solicitor for Defendant.

H. W. FRASER,
Of Counsel.

I hereby acknowledge service and a copy of the foregoing objections on this 31st day of October, 1929.

G. E. KIRK,
Counsel for Plaintiff.

STIPULATION RE INTERROGATORIES AND DEPOSITIONS.

(Filed Oct. 31, 1929.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for filing interrogatories under the Supplemental Bill of Complaint and answer thereto herein now due to expire on October 21, 1929, may be and it

hereby is extended thirty (30) days or to and including November 21, 1929.

It is further stipulated by and between counsel for the respective parties, the Honorable Court consenting, that the time for taking depositions of both parties under said Supplemental Bill of Complaint in accordance with the provisions of Equity Rule 47 shall be extended to commence to run from and after November 21, 1929.

RICHEY & WATTS,
Attorneys for Plaintiff.

October 18th, 1929.

EDWARD L. REED,
Attorney for Defendant.

October 18th, 1929.

Approved:
GEO. P. HAHN, *Judge.*

STIPULATION AND ORDER EXTENDING TIME OF DEFENDANT TO TAKE DEPOSITIONS.

(Filed Oct. 31, 1929.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including November 26, 1929, and both parties' times for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,
Attorneys for Plaintiff.

October 25, 1929.

EDWARD L. REED,
Attorney for Defendant.

October 24, 1929.

Approved:
GEO. P. HAHN, *Judge.*

STIPULATION RE DEPOSITIONS.

(Filed Dec. 4, 1929.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including December 26, 1929, and both parties' times for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,

November 29, 1929. *Attorneys for Plaintiff.*

EDWARD L. REED,

November 27, 1929. *Attorney for Defendant.*

STIPULATION RE DEPOSITIONS.

(Filed Jan. 3, 1930.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including January 26, 1930, and both parties' time for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,

December 26, 1929. *Attorneys for Plaintiff.*

EDWARD L. REED,

December 24, 1929. *Attorney for Defendant.*

STIPULATION RE DEPOSITIONS.

(Filed Feb. 4, 1930.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including February 26, 1930, and both parties' time for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,

January 31, 1930. *Attorneys for Plaintiff.*

EDWARD L. REED,

January 30, 1930. *Attorney for Defendant.*

Approved:

JOHN M. KILLITS, *U. S. Dist. Judge.*

MOTION AND ORDER EXTENDING TIME FOR TAKING DEPOSITIONS.

(Filed Feb. 21, 1930.)

[Case No. 964]

Now comes the defendant, by its attorneys, and moves the court for an order extending its time for taking original depositions under the provisions of Equity Rule 47, to and including March 26, 1930.

FRASER, HIETT, WALL & EFFLER,

Attorneys for Defendant.

February 21, 1930.

Time extended to and including March 26, 1930.

GEO. P. HAHN,

District Judge.

STIPULATION RE DEPOSITIONS.

(Filed Feb. 27, 1930.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking depositions under the Supplemental Bill of Complaint in the above entitled case in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including March 21, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,
Attorneys for Plaintiff.

Feb. 27, 1930.

EDWARD L. REED,
Attorney for Defendant.

Feb. 27, 1930.

It is so ordered:

GEO. P. HAHN, *U. S. Dist. Judge.*

MOTION AND ORDER EXTENDING TIME FOR TAKING DEPOSITIONS AND AFFIDAVIT OF EDWARD L. REED IN SUPPORT.

(Filed March 18, 1930.)

[Case No. 964]

Now comes the defendant, by its attorney, and moves that the time for taking original depositions under the provisions of Equity Rule 47 in the above entitled case, now due to expire on March 26, 1930, be extended to and including April 26, 1930.

EDWARD L. REED,
Attorney for Defendant.

March 17, 1930.

Time ordered extended to and including April 26, 1930, in accordance with above motion.

GEO. P. HAHN,
District Judge.

AFFIDAVIT OF EDWARD L. REED IN SUPPORT OF MOTION.

(Filed March 18, 1930.)

[Case No. 964]

STATE OF OHIO,
COUNTY OF MONTGOMERY, SS.

Edward L. Reed, of Dayton, Ohio, being first duly sworn deposes and says that he is attorney for the defendant in the above entitled case; that defendant's time for taking depositions under the provisions of Equity Rule 47 will expire on the 26th day of March 1930; that defendant has proceeded as rapidly as possible in making the necessary investigations and taking the depositions in this case and has up to the present time taken the depositions of between twenty and twenty-five witnesses in five states; that defendant has served notice on plaintiff that it will take the depositions of five witnesses at Joplin, Missouri, beginning March 19, 1930 and will take a deposition at Leadville, Colorado, beginning March 24, 1930; that the time now available for taking depositions will be barely sufficient to complete the taking of the testimony of the witnesses named in the aforesaid notice and no time will be left for the taking of depositions of other witnesses whose testimony may be necessary to the support of the defenses set out in the answer to the original bill of complaint; that the extension requested is for defendant's time for taking depositions under the original bill of complaint and not under the supplemental bill of complaint; and that defendant will need this additional time to complete its defenses to the original bill of complaint.

EDWARD L. REED.

Subscribed and sworn to before me a Notary Public in and for the aforesaid county, this 17th day of March, 1930.

MATTHEW SIEBLER,
Notary Public in and for Montgomery County, Ohio.

(Seal)

My commission expires July 22, 1931.

STIPULATION RE DEPOSITIONS.

(Filed April 1, 1930.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking depositions under the Supplemental Bill of Complaint in the above entitled case, in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including April 21, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,

March , 1930. *Attorneys for Plaintiff.*

EDWARD L. REED,

March 17, 1930. *Attorney for Defendant.*

STIPULATION RE DEPOSITIONS.

(Filed April 29, 1930.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including May 11, 1930, and both parties' time for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,

April 24, 1930. *Attorneys for Plaintiff.*

EDWARD L. REED,

April 22, 1930. *Attorney for Defendant.*

ORDER ALLOWING SUBSTITUTION OF BOND.

(Entered May 17, 1930, by Geo. P. Hahn, Judge.)

[Case No. 964]

The Defendant, The General Excavator Company, having submitted a substitute bond in lieu of the preliminary injunction, said bond having been executed by The General Excavator Company as principal and the United States Fidelity & Guaranty Company as surety, and said substitute bond having been approved by this court as to form and sufficiency,

IT IS HEREBY ORDERED:

First, that said bond, executed by The General Excavator Company as principal and the United States Fidelity & Guaranty Company as surety, be substituted for the bond executed by said The General Excavator Company as principal and the American Surety Company of New York as surety, and heretofore filed by the Defendant in lieu of a preliminary injunction.

Second, that the original bond, executed by The General Excavator Company as principal and the American Surety Company of New York as surety is hereby released and said The General Excavator Company and said American Surety Company of New York are hereby discharged from any and all liability under said bond.

GEO. P. HAHN,
District Judge.

Approved as to form this 15th day of May, 1930.

GEO. E. KIRK,
Of Counsel for Keystone Driller Co.

BOND IN LIEU OF PRELIMINARY INJUNCTION.

(Filed May 17, 1930.)

[Case No. 964]

UNITED STATES OF AMERICA,
NORTHERN DISTRICT OF OHIO,
WESTERN DIVISION, ss.

KNOW ALL MEN BY THESE PRESENTS, that we, The General Excavator Company, of Marion, in the County of Marion, and State of Ohio, as principal, and the United States Fidelity & Guaranty Company of the City of Baltimore and State of Maryland, as surety, are held and firmly bound unto the Keystone Driller Company in the sum of Fifteen Thousand ($15,000.00) Dollars, lawful money of the United States, to be paid to said Keystone Driller Company, its successors or assigns; to which payment, well and truly to be made, we bind ourselves and each of us, jointly and severally, and each of our successors and assigns, by these presents.

Sealed with our seals and dated this 7th day of May, 1930.

WHEREAS, the above named Keystone Driller Company, plaintiff in this cause, has presented to the court its motion for a preliminary injunction, which motion has been denied upon the condition that defendant, The General Excavator Company, file in this cause an appropriate bond payable to the plaintiff, and covering damages which may accrue to the plaintiff from and after the 22nd day of April, 1929.

NOW, THEREFORE, the condition of this obligation is such that, if the said The General Excavator Company shall pay to said Keystone Driller Company all profits or damages which may be decreed against said The General Excavator Company, in this cause, for infringement of the patents included in the bill of complaint in said cause between the 22nd day of April, 1929, and the date of the final decree in said cause, then these presents and this obligation shall be void; otherwise they shall remain in full force and effect.

THE GENERAL EXCAVATOR COMPANY,
By M. C. MCNEIL, *Secretary.*
UNITED STATES FIDELITY & GUARANTY CO.,
By THOMAS F. MOONEY, *Attorney-in-fact.*

Approved: (Surety Co. Seal)

GEO. P. HAHN,
United States District Judge.

STIPULATION RE DEPOSITIONS.

(Filed June 3, 1930.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for making Depositions under the Original and the Supplemental Bills of Complaint in the above entitled case in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including May 26, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,
Attorneys for Plaintiff.

May 8, 1930.

EDWARD L. REED,
Attorney for Defendant.

May 7, 1930.

Approved:
GEO. P. HAHN, *U. S. Dist. Judge.*

STIPULATION AND ORDER IN RE DEPOSITIONS.

(Filed June 26, 1930.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking Depositions under the Original and Supplemental Bills of Complaint in the above-entitled case, in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including July 26, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,
Attorneys for Plaintiff.

June 23rd, 1930.

EDWARD L. REED,
Attorney for Defendant.

June 21, 1930.

It is so ordered:
GEO. P. HAHN, *U. S. D. J.*

STIPULATION RE DEPOSITIONS.

(Filed July 29, 1930.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking Depositions under the Original and Supplemental Bills of Complaint in the above-entitled case, in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including August 26, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,

July 22, 1930. *Attorneys for Plaintiff.*

EDWARD L. REED,

July 21, 1930. *Attorney for Defendant.*

It is so ordered:

GEO. P. HAHN, *U. S. D. Judge.*

STIPULATION RE DEPOSITIONS.

(Filed Sep. 5, 1930.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking Depositions under the Original and Supplemental Bills of Complaint in the above-entitled case, in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including September 20, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,

August 22, 1930. *Attorneys for Plaintiff.*

EDWARD L. REED,

August 21, 1930. *Attorney for Defendant.*

STIPULATION RE DEPOSITIONS.

(Filed Sep. 23, 1930.)

[Case No. 964]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking depositions under the Original and Supplemental Bills of Complaint in the above-entitled case, in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including September 30, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,
Attorneys for Plaintiff.

September 19, 1930.

EDWARD L. REED,
Attorney for Defendant.

September 18, 1930.

It is so ordered:

JOHN M. KILLITS, *U. S. D. J.*

ORDER EXTENDING DEFENDANT'S TIME FOR TAKING DEPOSITIONS.

(Entered Sep. 29, 1930, by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby ordered that the defendant's time for taking depositions in both the Original and Supplemental Bills be and hereby is extended to and including October 30th, 1930.

GEO. P. HAHN,
United States District Judge.

ORDER EXTENDING DEFENDANT'S TIME FOR TAKING DEPOSITIONS.

(Entered Oct. 29, 1930, by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby ordered that the defendant's time for taking depositions on both the Original and Supplemental Bills be and hereby is extended to and including November 30th, 1930.

GEO. P. HAHN,
United States District Judge.

ORDER EXTENDING DEFENDANT'S TIME FOR TAKING DEPOSITIONS.

(Entered Nov. 26, 1930, by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby ordered that defendant's time for taking depositions under the provisions of Equity Rule 47 in the above-entitled case, now due to expire on November 30, 1930, be extended for a period of thirty days or to and including December 30, 1930. This is the last extension.

November 26, 1930.

GEO. P. HAHN,
United States District Judge.

MOTION TO COMPEL PRODUCTION AND INSPECTION OF DOCUMENTS AND AFFIDAVIT OF EDWARD L. REED.

(Filed Dec. 20, 1930.)

[Case No. 964]

Now comes The General Excavator Company, by its attorney, and moves this Court, under Equity Rule 58, for an order to compel plaintiff herein to produce for inspection of defendant, within at least five days after the granting of this motion, with the right to make copies, the following documents in plaintiff's possession or under its control and containing evidence material to the defense herein, to-wit:

1. All papers "marked for identification" by plaintiff, as plaintiff's exhibits A to I, inclusive; during the taking of the deposition of Bernard R. Clutter at Lakewood, N. J., October 21st to 23rd, 1930.

2. The cancelled check for $476.00 issued by the Keystone Driller Company on or about February 16th, 1928, to Bernard R. Clutter, and referred to in the Keystone Driller Company's letter dated December 17, 1928, to Mr. Bernard R. Clutter, 17 Edgewood Court, Lakewood, N. J.

3. The original memorandum of agreement dated April 11, 1925, between Bernard R. Clutter and the Keystone Driller Company and referred to in the letter of the Keystone Driller Company to Mr. Burn R. Clutter, 17 Edgewood Court, Lakewood, N. J., dated December 4, 1928.

4. The contract, mortgage, notes, books of account, showing credits and debits relating to the Keystone Driller Company's excavator, shop number 4918, shipped to the Clutter Contracting Co., March 9, 1925, on Pennsylvania Railroad car 925186 and invoiced by the Keystone Driller Company on March 9, 1925, to Clutter Contracting Company, Lakewood, N. J., Keystone Driller Company, order No. SS-1792, and correspondence between the Keystone Driller Company and Bernard R. Clutter or The Clutter Contracting Company, relating to the said excavator.

5. The contract, mortgage, notes, books of account showing credits and debits relating to the Keystone Driller Company's excavator, shop number

5,009 shipped to The Clutter Contracting Company, Tuckerton, N. J., on July 14, 1925, on N. P. car 68,513 and invoiced by the Keystone Driller Company to The Clutter Contracting Company, Lakewood, N. J., July 14, 1925, Keystone Driller Company Order No. SS-1902, and correspondence between the Keystone Driller Company and Bernard R. Clutter or The Clutter Contracting Company relating to said excavator.

6. Any and all papers, documents, records, correspondence, reports in the possession of or under the control of the Keystone Driller Company relating to the transaction between Keystone Driller Company and Bernard R. Clutter as testified to in the depositions of Bernard R. Clutter and Frederick W. Ransom, and/or relating to the memorandum of agreement between Bernard R. Clutter and the Keystone Driller Company dated April 11, 1925.

This motion is supported by an affidavit of Edward L. Reed attached hereto and made a part hereof as Defendant's Exhibit A.

EDWARD L. REED,
Attorney for Defendant.

December 16, 1930.

Notice.

Messrs. Richey & Watts,
Attorneys for Plaintiff,
1090 Union Trust Building,
Cleveland, Ohio.

Gentlemen:

Please take notice that the above Motion will be presented to his Honor, Judge Hahn, in the Court Room, Federal Building, Toledo, Ohio, on the 20th day of December, 1930, at 9:30 o'clock A. M., or as soon thereafter as counsel may be heard.

EDWARD L. REED,
Attorney for Defendant.

A copy of the above Motion, Notice and Affidavits were today mailed to Messrs. Richey & Watts, Attorneys for plaintiff, 1090 Union Trust Building, Cleveland, Ohio.

December 16, 1930. EDWARD L. REED.

EXHIBIT A.

AFFIDAVIT OF EDWARD L. REED.

(Filed Dec. 20, 1930.)

STATE OF OHIO,
COUNTY OF MONTGOMERY, ss.

Edward L. Reed, being first duly sworn, deposes and says that he is attorney for the defendant, The General Excavator Company, in the above entitled cause and that he has represented said defendant during the taking of various depositions to be used on behalf of defendant in the above entitled cause.

That the bill of complaint and supplemental bill of complaint in the above entitled cause charge infringement of five patents, one of which, Letters Patent No. 1,511,114, was granted on an application filed by Robert Rex Downie, an officer of the plaintiff company; that one of the defenses set up as to the alleged infringement of said patent No. 1,511,114 is the fact that the patentee thereof, the said Robert Rex Downie, was not the first, true or original inventor of the alleged invention described and claimed in said patent.

This defense as to patent No. 1,511,114, is supported by the depositions of Bernard R. Clutter, Phil C. Culbertson, W. L. Culbertson, John Cummings, M. A. Elsner, Lysle A. Hazen and Herbert H. Wallower, taken on behalf of the defendant herein and now on file in this Court. The aforesaid depositions show that the alleged invention of the aforesaid patent No. 1,511,114 was first conceived by Bernard R. Clutter and Herbert H. Wallower and was caused by them to be embodied in a full size operative device which was completed and publicly used on a commercial job by said Bernard R. Clutter and Herbert H. Wallower at Joplin, Missouri, in the early part of 1920, and prior to any use thereof by said Robert Rex Downie or the Keystone Driller Company.

In the above mentioned deposition of Bernard R. Clutter said Clutter testified that the officials of the Keystone Driller Company had knowledge of the public use of the device embodying the invention of said patent No. 1,511,114 at Joplin, Missouri, in the early part of 1920, and in a second deposition of said Robert Rex Downie taken at Lakewood, N. J., on October 21, 22 and 23, of 1930, and attended by deponent, said Clutter further testified that during the early part of the year 1925 said Robert Rex Downie, then an officer of the Keystone Driller Company, voluntarily called upon him at his

home in Lakewood, N. J.; that said Downie was at that time accompanied by one, Howard Elmire, an employee of the Keystone Driller Company, but stated that his business with Clutter was private and requested said Clutter to step out of the house, while Elmire remained in the house that he might discuss the same with him without Elmire having knowledge of what transpired; that Downie then told Clutter that he wished to talk to him about the device which had been used by Clutter at Joplin, Missouri, in the early part of 1920 and explained to Clutter that the Keystone Driller Company had subsequently taken out a patent on that device. Clutter then reminded Downie that the Keystone Driller Company had no right to such a patent as he was the inventor of the device. Downie stated that they had the patent and that they were about to bring suit on the same and that they did not wish Clutter to give to anyone any information regarding his use of the device at Joplin, Missouri. Clutter further testifies that Downie then told him that if he would keep quiet about what transpired at Joplin, Missouri, the Keystone Driller Company would give to him, Clutter, a one-half interest in a new Keystone excavator, that is, they would sell to Clutter a new Keystone excavator at the regular price and then give him credit for one-half of that price, which amounted to something in excess of Four Thousand ($4000.00) Dollars. Clutter further states that inasmuch as he had never made anything out of said invention and this seemed to be the only opportunity he would have to realize anything from the same, as he did not have the money to contest Keystone's right to the patent, he agreed to Downie's proposition and ordered the Keystone excavator, which was later delivered to him.

Clutter further testifies that subsequently to this discussion with Robert Rex Downie the Keystone Driller Company submitted to him for his signature certain papers which he was told were necessary in order to bind him to the proposition as made by Downie and that he signed said papers; that because of his inability to secure payment on certain contract work done by him he was unable to meet his payments on said machine and the said machine was later repossessed by the Keystone Driller Company; that at the time said machine was so repossessed the Keystone Driller Company's suit against The Byers Machine Company, involving patent No, 1,511,114, was pending in the United States District Court at Cleveland, Ohio, and in order to still bind Clutter to

his previous agreement Keystone Driller Company agreed to substitute a cash settlement of approximately Nineteen Hundred and Four ($1904.00) Dollars for the credit which Clutter had on account of the repossessed machine; that upon one pretext or another the Keystone Driller Company repeatedly delayed payment of the cash settlement but that after much correspondence the Keystone Driller Company issued to him a check for Four Hundred and Seventy-Six ($476.00) Dollars on account of the agreed settlement.

Clutter's testimony as to this transaction was corroborated by original letters written to Clutter by the Keystone Driller Company, and other documents, introduced in evidence as defendant's Exhibits Nos. 37, 38, 39, 40 and 41, and was further corroborated by the testimony of Frederick W. Ransom, a former officer of the Keystone Driller Company, whose deposition was taken at Akron, Ohio, on October 24, 1930, now on file in this Court.

Deponent further states that all of the papers referred to in paragraphs 1 to 6, inclusive, of the attached motion relate directly to the aforesaid transaction between the Keystone Driller Company and Bernard R. Clutter, as set forth in the Clutter deposition of October 21 to 23, inclusive, 1930.

All the papers referred to in said motion are undoubtedly in the possession of, or under the control of, the Keystone Driller Company. The papers referred to in paragraph 1 of said motion were in the possession of A. H. Edgerton, counsel for the plaintiff, during the taking of the deposition of said Clutter at Lakewood, N. J., October 21 to 23, inclusive, 1930. The witness Clutter has testified that the papers referred to in paragraphs 2 to 5, inclusive, of the said motion were signed by him and delivered to the Keystone Driller Company.

The production of the papers called for by said motion, in addition to corroborating the testimony of the several witnesses that the alleged invention of said patent No. 1,511,114 was conceived by and publicly used by said Clutter and Wallower, will establish the fact that this public use was known to the Keystone Driller Company prior to the alleged invention thereof by said Robert Rex Downie, and these papers and documents are therefore material to the defense that said Robert Rex Downie was not the first, original and true inventor of the alleged invention described and claimed in the aforesaid

Letters Patent and deponent believes that the production of these papers will enable defendant to make full proof of this fact.

It is requested that these papers be produced by plaintiff within five days from the granting of this motion because defendant's time for taking depositions expires on December 30, 1930, and the papers and documents called for by said motion are of such a character that they will require considerable study; and, the plaintiff herein and said Robert Rex Downie are located out of the district and more than one hundred (100) miles from the place of trial herein and if an inspection of the aforesaid papers shows that testimony in regard to the same is necessary this must be taken by deposition and within the time limit which has been fixed by the Court.

Deponent believes that defendant is entitled to the production and inspection of all the papers set forth in said motion because they are material to the defense set up in its answer and are all within the possession of or under the control of the plaintiff.

EDWARD L. REED.

Sworn to and subscribed before me this 16th day of December, 1930.

MATTHEW SIEBLER,

(Notarial Seal) *Notary Public in and for Montgomery County, Ohio.*

My Commission Expires July 22, 1931.

OFFER BY PLAINTIFF TO PRODUCE LETTERS, DOCUMENTS, ETC.

(Filed Dec. 31, 1930.)

[Case No. 964]

Now comes the Plaintiff and offers to submit to counsel for the Defendant in the above entitled cause, for inspection, all of the letters and other documents which are marked for identification by Plaintiff's counsel in the above entitled cause, the cancelled check and the Memorandum Contract, the mortgages, notes, etc. and all of the

correspondence between Clutter and his company, on the one hand, and Plaintiff, on the other hand, regarding the two excavating machines which were repossessed by the Plaintiff from Mr. Clutter and concerning which Mr. Clutter testified; this submission and inspection to be at the office of Richey & Watts, 1090 Union Trust Building, Cleveland, Ohio, at a time in the near future suitable to counsel for both parties. And, moreover, Plaintiff offers to furnish, at Defendant's expense, to Defendant's counsel, copies of any of these documents which Defendant's counsel will agree to offer in evidence at the hearing in the above entitled cause.

This offer is made without Plaintiff conceding that any of these documents or letters are material to any issue in this cause and without waiving any right to object or to move to strike out, or to take other action, regarding such letters and documents, or any evidence concerning the same.

RICHEY & WATTS,
Counsel for Plaintiff.

AFFIDAVIT OF F. O. RICHEY AND A. H. EDGERTON.

(Filed Dec. 31, 1930.)

[Case No. 964]

STATE OF OHIO,
COUNTY OF CUYAHOGA, ss.

F. O. Richey and A. H. Edgerton being duly sworn, depose and say:

We are members of the firm of Richey & Watts, who have and do represent the plaintiff in numerous suits brought upon the Downie Patent No. 1,511,114, including the Byers case which has been decided by the Court of Appeals and the two suits at bar. One or both of us have been closely associated with the litigation over this patent ever since it was instituted. Mr. Richey has conducted all of these suits for the plaintiff. Mr. Edgerton has as-

sisted in all of them and has attended the taking of all of the depositions taken in the above entitled case, including those by Mr. Clutter.

We are familiar with the testimony regarding the Joplin experiment and with the machine said to have been used therein and illustrated in Defendant's Exhibit 26. In the opinion of both and each of us the work at Joplin was an abandoned experiment and the machine illustrated in Exhibit 26 embodies none of the inventions of the Downie patent No. 1,511,114, and is described by none of the claims in that patent. In our opinion the machine illustrated in Exhibit 26 is not capable of operating and did not operate according to the machine of the said Downie patent or realized the advantages or results of that machine upon which its patentability has been sustained by Judge Jones or the Court of Appeals in this Circuit.

The Joplin machine contains certain elements and operates in certain respects as does the machine of the patent, but that is true of a great many of the machines relied upon by the Defendant in the Byers case, and was not sufficient to defeat the patentability of the machine in the courts. Many of the operations and functions of the machine of the patent are not even claimed by Defendants' witnesses to have been realized by the machine of Exhibit 26 and at least one such that some of the witnesses claim, in our opinion, the machine of Exhibit 26 is clearly incapable of performing.

We have gone over the brief filed with this affidavit and we are informed and believe that the facts stated in said brief on information and belief are true.

In coming to the conclusion that the Joplin work was an abandoned experiment we have been persuaded by the holding of the Supreme Court in *Elizabeth vs. Pavement*, 97 U. S. 126, and by the Court in this District (Westenhaver, *J.*) in *Buckeye vs. Wolf*, 291 Fed. 253 which was affirmed by the Court of Appeals in this Circuit in *Wolf vs. Buckeye*, 296 Fed. 680, which has further been affirmed by numerous other courts on the patents involved in those suits.

(*Buckeye v. Cooley*, 17 Fed. (2d) 453, C. C. A. 3d Cir.;

Buckeye v. Petersine, 19 Fed. (2d) 721, C. C. A. 6th Cir.;

Buckeye v. Hillpot, 24 Fed. (2d) 341, C. C. A. 3d Cir.;

Buckeye v. Blum, 27 Fed. (2d) 333, C. C. A. 6th Cir.)

Further affiants sayeth naught.

F. O. RICHEY,
A. H. EDGERTON.

Sworn to before me and subscribed in my presence this 29th day of December, 1930.

J. D. DOUGLASS,
(Seal) *Notary Public.*

J. D. DOUGLASS, NOTARY PUBLIC.
My Commission Expires July 21, 1933.

AFFIDAVIT OF ROBERT REX DOWNIE.

(Filed Dec. 31, 1930.)

[Case No. 964]

PRINTER'S NOTE:

This affidavit was offered in evidence as Defendant's Exhibit No. 129. It has been omitted at this point to comply with the Equity Rule against duplication, and will be found duly indexed among the Exhibits.

ORDER DISMISSING DEFENDANTS' MOTION TO COMPEL PRODUCTION AND INSPECTION OF DOCUMENTS.

(Entered Feb. 2, 1931, by Geo. P. Hahn, Judge.)

[Case No. 964]

This cause came on to be heard before this Honorable Court the 3rd day of January, 1931, upon Defendants' motion to compel production and inspection of documents dated December 15, 1930, and the Court having considered the same upon the briefs and arguments of counsel for the parties.

It is hereby ordered, adjudged and decreed that the Defendants' motion to compel production and inspection of documents be dismissed without prejudice and the same is hereby dismissed without prejudice.

GEO. P. HAHN,
District Judge.

Approved as to form by counsel for Defendants.

GEDDES, SCHMETTAU, WILLIAMS, EVERSMAN & MORGAN,
EDWARD H. REED,
FRASER, HIETT, WALL & EFFLER,

Approved as to form by counsel for Plaintiff.

RICHEY & WATTS.

STIPULATION IN RE TITLE TO CERTAIN PATENTS.

(Filed Feb. 11, 1931.)

[Case No. 964]

It is hereby stipulated and agreed by and between counsel in the above entitled cause, this Honorable Court consenting,

1. That the Keystone Driller Company, Plaintiff herein, is now and was at the time of filing the Bill of Complaint in the above entitled suit, the owner of the full right, title and interest in and to the following patents, together with the right to sue and collect for damages, profits and gains arising from infringement thereof:

No. 1,317,431, Sept. 30, 1919, Le Roy P. Clutter,
No. 1,511,114, Oct. 7, 1924, R. R. Downie,
No. 1,543,250, June 23, 1925, R. R. Downie;

2. That the Keystone Driller Company, Plaintiff herein, is now and was at the time of filing the Supple-

mental Bill of Complaint in the above entitled suit, the owner of the full right, title and interest in and to the following patents, together with the right to sue and collect for damages, profits and gains arising from infringement thereof:

No. 1,709,466, April 16, 1929, R. R. Downie,
No. 1,716,432, June 11, 1929, R. R. Downie;

3. That the catalogs, bulletins Nos. 2805 and 2703 were issued and distributed by the Defendant, The General Excavator Company;

4. That the Defendant, The General Excavator Company, made, and/or caused to be made, and/or used, and/or sold Back Hoe Machines like those illustrated on pages 2, 9, 10, 11 and 19, and described on pages 8 and 9 in catalog No. 2805, identified as Plaintiff's Exhibit No. 2 attached to Plaintiff's interrogatories, and the advertisements attached to the Affidavit of Vale Downie and identified as Plaintiff's Exhibits "R" and "S," and the Defendant's photographs 170 and 171 identified as Defendant's Exhibits 1 and 2, between June 23, 1925 and February 9, 1929;

5. That the Defendant, The General Excavator Company, made and/or used, and/or sold Back Hoe Excavator Scoops and Back Hoe Excavator Scoop Assemblies like those illustrated on pages 2, 9, 10, 11 and 19 and described on pages 8 and 9 in catalog No. 2805, identified as Plaintiff's Exhibit No. 2 attached to Plaintiff's interrogatories, and the advertisements attached to the Affidavit of Vale Downie and identified as Plaintiff's Exhibits "R" and "S," and the Defendant's photographs 170 and 171 identified as Defendant's Exhibits 1 and 2, between June 11, 1929 and August 23, 1929.

EDWARD L. REED,
Counsel for Defendant.
February 4, 1931.

RICHEY & WATTS,
Counsel for Plaintiff.
February 3, 1931.

STIPULATION AND ORDER ALLOWING USE OF UNCERTIFIED PRINTED COPIES OF PATENTS IN SUIT.

(Entered Feb. 16, 1931, by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby stipulated and agreed by and between counsel in the above entitled cause, subject to the approval of the Court, that uncertified printed copies of the patents in suit in the above entitled case may be used with the same force and effect in this case as original or certified copies.

RICHEY & WATTS,

February 12, 1931. *Counsel for Plaintiff.*

EDWARD L. REED,

February 13, 1931. *Counsel for Defendant.*

It is so ordered.

GEO. P. HAHN,

United States District Judge.

ORDER ALLOWING AMENDMENT TO DEFENDANT'S ANSWER TO SUPPLEMENTAL BILL OF COMPLAINT.

(Entered Feb. 16, 1931, by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby ordered that the attached amendments to defendant's answer to the supplemental bill of complaint herein be entered and made a part of the original answer and that said amendments shall have the same force and effect as if they had formed a part of the answer as originally filed.

GEO. P. HAHN,

District Judge.

We consent to the foregoing order.

Signed at Cleveland, Ohio, this 3rd day of February, 1931.

RICHEY & WATTS,

Attorneys for Plaintiff.

Signed at Dayton, Ohio, this 4th day of February, 1931.

EDWARD L. REED,
Attorney for Defendant.

AMENDMENT TO ANSWER TO SUPPLEMENTAL BILL OF COMPLAINT.

(Filed Feb. 16, 1931.)

[Case No. 964]

Now comes the defendant, by its attorney, with the approval of this Honorable Court, and amends its answer to the supplemental bill of complaint as follows:

In paragraph 18 of said bill of complaint, at the end of the list of prior art patents, on page 8 of said answer, insert the following:

557,350	Webber	Mar. 31,	1896
579,589	King	Mar. 30,	1897
580,494	King	Apr. 13,	1897
674,417	Howard	May 21,	1901
881,695	Kersey	Mar. 10,	1908
999,953	Boehm	Aug. 24,	1912
1,047,991	Robinson	Dec. 24,	1912
1,107,899	Clutter	Aug. 18,	1914

Foreign Patents:

Great Britain	Whitaker	9,893	1899
Great Britain	H. Jubb	11,496	1903
Great Britain	P. W. D'Alton	655	1882

Publications:

Catalogue of the American Hoist and Derrick Co., of St. Paul, Minn., copyrighted in 1909.

Engineering News & Contracting Magazine, dated October 1924.

"Excavating Machinery" by A. B. McDaniel, published 1913 by McGraw-Hill Book Co., Inc., 239 W. 39th St., New York, N. Y., page 256.

On page 8 of said answer, following paragraph 18, insert the following paragraph:

"18a. Defendant, further answering, avers that the Letters Patent sued on, and each of them, are null and void because prior to the alleged inventions of said Robert Rex Downie the alleged improvements described and claimed in said patents, or the material and substantial parts thereof, were known and used by the following named persons, at the following named places, to-wit:

Daniel H. Mahoney, late of North Bend, Ohio, at Vincennes, Ind., and elsewhere.

E. O. Rood, deceased, and Charles W. Rood, of Orlando, Florida.

Bernard R. Clutter, now of 17 Edgewood Court, Lakewood, New Jersey, at Joplin, Missouri.

Herbert H. Wallower, now of 815 Harrison Ave., Leadville, Colorado, at Joplin, Missouri.

The Marion Steam Shovel Co., of Marion, Ohio, (used by the Charleston South Carolina Mining and Mfg. Co., of Charleston, S. C.; Dunnellon Phosphate Co., at Dunnellon, Florida; and Bartow Phosphate Co., at Bartow, Florida).

The Industrial Brown Hoist Co., Cleveland, Ohio, (formerly Brown Hoisting Machinery Co.).

The Keystone Driller Co., of Beaver Falls, Pa.

The Fairbanks Steam Shovel Co., of Marion, Ohio, (used by George A. Cassell at Crookston, Minnesota, and by the San Benito Land & Water Co., or Rio Grande Construction Co., at San Benito, Texas).

The Vulcan Iron Works, of Toledo, Ohio, (used by the Gillespie Co., of Pittsburgh, Pa., at Allegheny, Pa., Passaic, New Jersey and elsewhere; by Anderson Brothers at St. Louis, Missouri and by Farley and Green at Chicago, Illinois, and elsewhere).

The Thew Automatic Shovel Co., of Lorain, Ohio.

The Northwest Boulevard Co., of Columbus, Ohio.

A. N. Cross, of Tomah, Wisconsin, in Minnesota, Iowa, and Nebraska.

THE GENERAL EXCAVATOR COMPANY,
By EDWARD L. REED,
Attorney.

ORDER ALLOWING AMENDMENT TO DEFENDANT'S ANSWER TO ORIGINAL BILL OF COMPLAINT.

(Entered Feb. 16, 1931, by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby ordered that the attached amendments to defendant's answer to the original bill of complaint herein be entered and made a part of the original answer and that said amendments shall have the same force and effect as if they had formed a part of the answer as originally filed.

GEO. P. HAHN,
District Judge.

We consent to the foregoing order.

Signed at Cleveland, Ohio, this 3rd day of February, 1931.

RICHEY & WATTS,
Attorneys for Plaintiff.

Signed at Dayton, Ohio, this 4th day of February, 1931.

EDWARD L. REED,
Attorney for Defendant.

AMENDMENT TO ANSWER TO ORIGINAL BILL OF COMPLAINT.

(Filed Feb. 16, 1931.)

[Case No. 964]

Now comes the defendant, by its attorney, with the approval of this Honorable Court, and amends its answer to the original bill of complaint as follows:

In paragraph 19 of said Answer, at the end of the list of prior patents enumerated on page 9 of the answer, insert the following:

557,350	Webber	Mar. 31, 1896
579,589	King	Mar. 30, 1897
580,494	King	Apr. 13, 1897
674,417	Howard	May 21, 1901
881,695	Kersey	Mar. 10, 1908
999,953	Boehm	Aug. 8, 1911
1,047,991	Robinson	Dec. 24, 1912
1,107,899	Clutter	Aug. 18, 1914

Foreign Patents:

Great Britain	Whitaker	9,893	1899
Great Britain	H. Jubb	11,496	1903
Great Britain	P. W. D'Alton	655	1882

Publications:

Catalogue of the American Hoist and Derrick Co., of St. Paul, Minn., copyrighted in 1909.

Engineering News & Contracting Magazine, dated October 1924.

"Excavating Machinery" by A. B. McDaniel, published 1913 by McGraw-Hill Book Co., Inc., 239 W. 39th St., New York, N. Y., page 256.

In paragraph 20 of said answer, at the end of the list of prior users on page 10 of the answer, insert the following:

Bernard R. Clutter, now of 17 Edgewood Court, Lakewood, New Jersey, at Joplin, Missouri.

Herbert H. Wallower, now of 815 Harrison Ave., Leadville, Colorado, at Joplin, Missouri.

The Marion Steam Shovel Co., of Marion, Ohio, (used by the Charleston, South Carolina Mining and Mfg. Co., of Charleston, S. C.; Dunnellon Phosphate Co., at Dunnellon, Florida; and Bartow Phosphate Co., at Bartow, Florida).

The Industrial Brown Hoist Co., Cleveland, Ohio, (formerly Brown Hoisting Machinery Co.).

The Keystone Driller Co., of Beaver Falls, Pa.

The Fairbanks Steam Shovel Co., of Marion, Ohio, (used by George A. Cassel at Crookston, Minnesota, and by the San Benito Land & Water Co., or Rio Grande Construction Co., at San Benito, Texas).

The Vulcan Iron Works, of Toledo, Ohio, (used by the Gillespie Co., of Pittsburgh, Pa., at Allegheny, Pa., Passaic, New Jersey and elsewhere; by Anderson Brothers at St. Louis, Missouri and by Farley & Green at Chicago, Illinois, and elsewhere).

The Thew Automatic Shovel Co., of Lorain, Ohio.

The Northwest Boulevard Co., of Columbus, Ohio.

A. N. Cross, of Tomah, Wisconsin, in Minnesota, Iowa and Nebraska.

THE GENERAL EXCAVATOR COMPANY,
By EDWARD L. REED,
Attorney.

ORDER CONSOLIDATING CAUSE NO. 964 WITH CAUSE NO. 965 FOR THE PURPOSE OF TRIAL.

(Entered March 3, 1931, by Geo. P. Hahn, Judge.)

[Case No. 964]

It is hereby ordered that the above entitled suit shall be tried and heard by this court together with the suit of Keystone Driller Company, Plaintiff vs. The Osgood Company, Defendant, Equity No. 965; that testimony taken at the hearing by the Plaintiff or either of the Defendants be used in each case with the same force and effect as though the witnesses were examined separately in each of said cases, provided however that, at the trial, the witnesses may be examined or cross examined by the Attorney for either defendant on behalf of the other defendant, or the Attorney for each defendant may examine and cross examine the witnesses separately if they so desire; that objections and exceptions made by counsel in either case apply with equal force and effect in both cases; that any and all exhibits introduced in evidence by any of the parties hereto and/or any test or inspection or examination of any machine or apparatus proffered at hearing by any party hereto be considered by the Court with the same force and effect in both cases (insofar as they may apply to both cases) as though such exhibit were introduced, and such test, inspection or examination were made separately in each of said cases; that if the Court desires arguments and/or briefs after the trial the former be made and the latter filed in the two cases together, but the defendants to have the right to file separate briefs. Plaintiff waives its objection heretofore made to the taking in both cases together of the depositions hitherto taken; that a separate copy of any and all paper exhibits shall be filed in each case, provided that when the original of any of said exhibits is filed in one case, a photographic or other copy of said original exhibit may be filed in the other case subject to comparison with the original and correction if any error or discrepancy be found; that the Plaintiff provide each of the Defendants with a copy of its record and that separate records shall be made and filed in each case, and that separate decrees be entered in each case; and that nothing herein shall deprive the parties to said suits of any material rights or defenses to

which they would be entitled if these cases were tried separately.

GEO. P. HAHN,
U. S. District Judge.

February 23, 1931. I assent to the entry of the above Order.

EDWARD L. REED,
Counsel for Defendant.

February 25, 1931. We assent to the entry of the above Order.

RICHEY & WATTS,
Counsel for Plaintiff.

STIPULATION RE USE OF DEPOSITIONS OF JOHN B. WEBBER, WALTER S. CULVER AND FRANK H. KING.

(Filed March 3, 1931.)

[Case No. 964]

It is hereby stipulated by and between the parties hereto that the depositions of John B. Webber, Walter S. Culver of Toledo, Ohio, and Frank H. King of Marion, Ohio, taken on behalf of the defendant herein and any and all exhibits offered in evidence in connection with said depositions may be offered and received in evidence in the above entitled case under U. S. Revised Statutes, Sections 863, 864 and 865, with the same force and effect as though the said witnesses were at the time of trial herein residing more than one hundred (100) miles from the place of trial thereof.

RICHEY & WATTS,
Counsel for Plaintiff.

Dated March 3, 1931.

EDWARD L. REED,
Counsel for Defendant.

Dated March 3, 1931.

STIPULATION RE DEPOSITION OF WILLIAM MITCHELL.

(Filed March 4, 1931.)

[Case No. 964]

It is hereby stipulated by and between the parties hereto that the deposition of William Mitchell of Marion, Ohio, taken on behalf of the defendant herein and any and all exhibits offered in evidence in connection with said deposition may be offered and received in evidence in the above-entitled case under U. S. Revised Statutes, Sections 863, 864 and 865, with the same force and effect as though the said witness was at the time of trial herein residing more than one hundred (100) miles from the place of trial thereof.

RICHEY & WATTS,
Counsel for Plaintiff.

Dated March 4, 1931.

EDWARD L. REED,
Counsel for Defendant.

Dated March 4, 1931.

ORDER PERMITTING TAKING OF DEPOSITIONS AT SOUTH MILWAUKEE, WISCONSIN.

(Entered April 20, 1931, by Geo. P. Hahn, Judge.)

[Case No. 964]

Upon motion of the defendant, by its attorneys, for leave to take depositions herein and the affidavit of Edward L. Reed in support thereof, it is ordered that said defendant be permitted to take the depositions of the persons named in said motion, to-wit:

William Bager	South Milwaukee, Wisconsin
Werner Lehman	South Milwaukee, Wisconsin
H. O. Jacobson	South Milwaukee, Wisconsin
D. P. Eells	South Milwaukee, Wisconsin
C. A. Kelly	South Milwaukee, Wisconsin

Andrew Vahldieck	South Milwaukee, Wisconsin
N. A. McGrath	South Milwaukee, Wisconsin
Noel S. Hayward	South Milwaukee, Wisconsin
J. H. Imse	South Milwaukee, Wisconsin
M. T. Smith	South Milwaukee, Wisconsin

for use at the trial of the above entitled case in accordance with United States Revised Statutes 863, 864 and 865 upon such notice as is provided by law.

GEO. P. HAHN,
Judge.

MOTION BY PLAINTIFF FOR PROMPT DECREE.

(Filed June 25, 1931.)

[Case No. 964]

Now comes the Plaintiff and moves the Court for a prompt entry of the attached Decree for the following reasons:

(1) The Decree conforms to the decision of this Court handed down on June 22, 1931.

(2) This litigation has been pending since 1926. This particular suit has been pending since the first of 1929. The litigation should be on its way. It can not go on forever.

(3) The Court has found that Mr. Downie's practice regarding certain matters was "highly reprehensible" which, of course, reflects upon Mr. Downie's character and he is entitled to a review of this Court's view on this subject promptly. This is a matter of personal privilege with him and nothing should interfere with or delay his right to an early review.

(4) There is no question regarding the validity and the infringement of the Clutter patent, in any event, and

there is no reason why the entry of this decree should be withheld because of any questions which might be undeterminated regarding any of the other patents. The validity of the Clutter patent was again upheld by Judge Jones in the *Day & Maddock* case.

(5) The Petition for Leave to File Bill of Review in the *Byers* case should not deter the entry of this decree for the reason that such must necessarily be denied since proceedings by Bill of Review is not the proper proceeding in the *Byers* case. (*Central California Canners*, 282 Fed. 406 (C. C. A. 9th); *Simmons vs. Grier*, 258 U. S. 82; *National Brake vs. Christenson*, 278 Fed. 40 (C. C. A. 7th) and, second, because even if it is referred to Judge Jones, it must be denied by him since in the *Day & Maddock* Judge Jones has already three times refused the Plaintiff the right to take these proofs. There is no reason for his changing his mind on the fourth effort.

(6) Judge Jones has, with knowledge of the alleged new evidence in the instant cases and the charges of suppression, fraud, and the furor about the same, held the first Downie patent valid again.

RICHEY & WATTS,
Attorneys for Plaintiff.

Cleveland, Ohio, June 24, 1931.

It is so ordered.

....,
United States District Judge.

June ..., 1931.

ORDER OF CONSOLIDATION FOR APPEAL.

(Entered Sept. 15, 1931, by Geo. P. Hahn, Judge.)

[Case No. 965]

It appearing to the Court that the cases of Keystone Driller Company vs. The General Excavator Company and Keystone Driller Company vs. The Osgood Company, Nos. 964 and 965 respectively, were consolidated for trial, and it further appearing that the best interest of everyone concerned can be served by the consolidation of the printed record in these cases to be sent to the Circuit Court of Appeals.

IT IS THEREFORE ORDERED That the said cases be consolidated into one printed record for the purpose of their removal to the Circuit Court of Appeals for the Sixth Circuit, said record to contain pleadings and papers in each individual case but to include only one copy of such records as appear identical in each case.

GEO. P. HAHN,

United States District Judge.

Dated September 15, 1931.

BILL OF COMPLAINT.

(Filed Feb. 9, 1929.)

[Case No. 965]

To the Honorable, the Judges of the District Court of the United States for the Northern District of Ohio, Western Division:

Keystone Driller Company, plaintiff, brings this its bill of complaint against The Osgood Company, defendant; and plaintiff avers:

I. Plaintiff is a corporation of the State of Pennsylvania, having its principal place of business at Beaver Falls, Pennsylvania, and is a citizen and inhabitant of said State of Pennsylvania.

On information and belief, defendant is a corporation of the State of Ohio, having its principal place of business at Marion, Marion County, Ohio, and is a citizen and inhabitant of said State of Ohio and of the Northern District of Ohio, Western Division.

II. The Court's jurisdiction in this cause is based upon the grounds that the suit is one for infringement of United States patents and prays equitable relief and that the defendant is an inhabitant of the aforesaid district and/or has therein a regular and established place of business where it has committed acts of infringement hereinafter complained of.

III. On and prior to February 11, 1915, Le Roy P. Clutter, a citizen of the United States, then residing at Beaver Falls, Pennsylvania, was the original, first and true inventor of certain new and useful improvements in Ditching or Excavating Machines, not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his hereinafter mentioned application for patent therefor in the United States, and not in public use or on sale in the United States for more than two years prior to said application, and not by him abandoned prior to said application, and not first patented or caused to be patented by him or his legal representatives or assigns in any foreign country upon an application filed more than twelve months prior to the filing of said application in the United States. So being the original, first and true inventor, as aforesaid, said Le Roy P.

Clutter, on February 11, 1915, made application to the Commissioner of Patents of the United States for a patent for said invention, in accordance with the then existing laws of the United States, and complied in all respects with the conditions and requirements of said laws.

IV. Upon said application of Le Roy P. Clutter, due proceedings were had, in accordance with all requirements of law, such that on September 30, 1919, United States patent No. 1,317,431, signed, sealed and executed in due form of law, was issued for said invention or improvements in Ditching or Excavating Machines, to said Le Roy P. Clutter. And plaintiff brings here into court a copy of said patent and prays that the same may be taken as part of this bill of complaint.

V. For good and valuable consideration, by an instrument in writing executed and delivered on or about May 17, 1921, said Le Roy P. Clutter assigned unto plaintiff the entire right, title and interest in and to said patent No. 1,317,431, together with all rights of recovery for past infringement thereof; as by reference to said instrument or a duly authenticated copy thereof here in court to be produced will more fully appear.

VI. On and prior to June 27, 1921, Robert Rex Downie, a citizen of the United States, then residing at Beaver Falls, Pennsylvania, was the original, first and true inventor of new and useful improvements in Excavating Machines, not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his hereinafter mentioned application for patent therefor in the United States, and not in public use or on sale in the United States for more than two years prior to said application, and not by him abandoned to the public, and not first patented or caused to be patented by him or his legal representatives or assigns, in any foreign country upon an application filed more than twelve months prior to the filing of said application in the United States. So being the original, first and true inventor, as aforesaid, said Robert Rex Downie, on June 27, 1921, made application to the Commissioner of Patents of the United States for a patent for his said invention, in accordance with the then existing laws of the United States, and complied in all respects with the conditions and requirements of said laws.

VII. For good and valuable consideration, by an instrument in writing executed and recorded in the Patent Office before the grant of a patent on his said application, the said Robert Rex Downie assigned to plaintiff the whole right, title and interest in and to his said invention and authorized the Commissioner of Patents to issue the patent for said invention to the plaintiff.

VIII. Upon said application of Robert Rex Downie, and pursuant to his said assignment to plaintiff, due proceedings were had, in accordance with all requirements of law, such that on October 7, 1924, United States patent No. 1,511,114, signed, sealed and executed in due form of law, was issued to plaintiff for said invention or improvements in Excavating Machines. And plaintiff brings here into court a copy of said patent No. 1,511,114 and prays that the same may be taken as part of this bill of complaint.

IX. On and prior to January 8, 1925, Robert Rex Downie, a citizen of the United States, then residing at Beaver Falls, Pennsylvania, was the original, first and true inventor of certain new and useful improvements in Excavating Machines, not known or used by others in this country before his invention or discovery thereof, not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his hereinafter mentioned application for patent therefor in the United States, and not in public use or on sale in the United States for more than two years prior to said application, and not by him abandoned to the public, and not first patented or caused to be patented by him or his legal representatives or assigns in any foreign country upon an application filed more than twelve months prior to the filing of said application in the United States. So being the original, first and true inventor, as aforesaid, said Robert Rex Downie, on January 8, 1925, made application to the Commissioner of Patents of the United States for a patent on his said invention, in accordance with the then existing laws of the United States, and complied in all respects with said laws.

X. For good and valuable consideration by an instrument in writing executed and recorded in the Patent Office before the grant of a patent on his said application of January 8, 1925, the said Robert Rex Downie assigned to plaintiff the whole right, title and interest in and to his said invention set forth in the application last

mentioned, and authorized the Commissioner of Patents to issue the patent therefor to the plaintiff:

XI. Upon said Robert Rex Downie's said application of January 8, 1925, and pursuant to his assignment to plaintiff of the invention described therein, due proceedings were had, in accordance with all requirements of law, such that on June 23, 1925, United States Patent No. 1,543,250, signed, sealed and executed in due form of law, was issued to plaintiff for said invention or improvements in Excavating Machines. And plaintiff brings here into court a copy of said patent No. 1,543,250 and prays that the same may be taken as part of this bill of complaint.

XII. By reason of the premises, prior to the filing of this bill of complaint, and prior to the acts of infringement hereinafter complained of, plaintiff became and has ever since remained and now is the sole owner of said patents Nos. 1,317,431, 1,511,114 and 1,543,250, and of all rights thereunder including all rights of recovery for past infringement of said patent 1,317,431 since the date of the assignment thereof.

XIII. Under the protection of the aforesaid patents, plaintiff is engaged in the manufacture and sale of Excavating Machines embodying said inventions. Said inventions of said patents and each of them are of great utility and value, and have come extensively into public use, with substantial benefits to the public and to the plaintiff. The plaintiff has been to large effort and expense in and about said inventions for the purpose of introducing them into use and supplying embodiments thereof. Its business in this connection is now threatened with irreparable injury by the acts of defendant hereinafter complained of.

XIV. Prior to December 22, 1926, The Byers Machine Company, a corporation of Ohio, doing business at Ravenna, Ohio, within the Northern District of Ohio and the Eastern Division thereof, made, used and sold and was threatening to continue to make, use and sell excavating machines embodying the inventions set forth in said patents Nos. 1,317,431, 1,511,114 and 1,543,250 and in infringement and in violation of the rights of the plaintiff, Keystone Driller Company, under the aforesaid letters patent; wherefore said plaintiff, on December 22, 1926 brought its bill of complaint in the District Court of the United States for the Northern District of

Ohio, Eastern Division, at Cleveland, Ohio, against said The Byers Machine Company, and in said suit (Equity No. 2084) complained that the said The Byers Machine Company had infringed claim 4 of patent No. 1,317,431 and claims 1 to 14 inclusive of patent No. 1,511,114 and claims 1 to 10 inclusive of patent No. 1,543,250 and threatened further infringement of said letters patent; and said The Byers Machine Company filed its answer to the said bill of complaint; and after the filing of said answer, by stipulation between counsel for the parties to said suit, Byers Machine Company, a corporation of Maryland, was made a party defendant, and the bill of complaint filed December 22, 1926, was amended *nunc pro tunc* to include this new party defendant, Byers Machine Company, and said Byers Machine Company filed an amended answer to the amended bill of complaint; and said cause was tried before the Hon. D. C. Westenhaver, at Cleveland, Ohio, on September 15, 16 and 19, 1927 and was submitted on the briefs of the opposing parties without oral argument by counsel for the respective parties; and the Hon. D. C. Westenhaver died in July, 1928 without having rendered an opinion; and by stipulation between counsel for the respective parties the cause was submitted to the Hon. Paul Jones, District Judge, at Cleveland, Ohio, without a second trial, and was argued before him on January 9, 1929 by counsel for the respective parties; and on the twenty-third day of January, 1929 the court rendered its opinion sustaining the validity of claim 4 of patent No. 1,317,431, claims 1 to 14 inclusive of patent No. 1,511,114 and claims 1 to 10 inclusive of patent No. 1,543,250, and finding all said claims infringed; and on the thirty-first day of January, 1929, a final decree was entered for the plaintiff, Keystone Driller Company, affirming the validity of the claims aforesaid, and ordering a perpetual injunction enjoining and restraining said The Byers Machine Company and Byers Machine Company and each of them from infringing said claims, as will fully appear by reference to the attached copy of the decree; and a perpetual injunction was accordingly issued February 1, 1929 and served that day on a duly authorized agent for said defendants.

XV. Since the respective dates of issue of said patents Nos. 1,317,431, 1,511,114 and 1,543,250, and since the plaintiff acquired its title to and rights under said patents as hereinbefore recited, and within six years

next preceding the filing of this bill of complaint, and without leave of or license from plaintiff, and in defiance of said patents and each of them and of plaintiff's rights thereunder, the said The Osgood Company has made and/or caused to be made and has used and has sold, and is now making, using and selling, within said Northern District of Ohio, Western Division, and elsewhere within the United States of America, numerous excavating machines embodying the inventions described and claimed in and patented by said patents Nos. 1,317,431, 1,511,114 and 1,543,250, and each of them, in infringement of said patents and each of them; and particularly in infringement of claim 4 of said patent No. 1,317,431 of claims 6, 7, 8, 9, 10, 11, 12, 13 and 14 of said patent No. 1,511,114 and of claims 1, 2, 3, 4, 5, 6, 9 and 10 of said patent No. 1,543,250, all as by reference to the accompanying affidavit of Robert Rex Downie together with the exhibits attached thereto will more fully appear.

XVI. Defendant has derived and continues to derive unlawful gains and profits from said infringement, and plaintiff has suffered and is threatened with irreparable damage by reason of said infringement. Defendant threatens to continue all of said acts above complained of. Defendant by its acts aforesaid has impaired plaintiff's enjoyment of its exclusive rights and privileges granted upon issue of said letters patent, and each of them, and has unjustly deprived plaintiff of large profits which it would have realized and enjoyed from said inventions except for defendant's infringement.

XVII. The inventions of the aforesaid patents are susceptible of conjoint embodiment and use in one and the same construction, and have been so conjointly embodied and used in the machines made and sold by defendant as aforesaid.

XVIII. Plaintiff has given notice to the public that its machines are patented by fixing thereon the word "patented" together with the day and year each of its aforesaid patents was granted. Plaintiff has also specifically notified defendant of said patents and of plaintiff's ownership thereof and of the infringements complained of, but said defendant has continued and will unless restrained continue its acts complained of notwithstanding and in spite of said notice.

WHEREFORE plaintiff prays:

(a) That the defendant, The Osgood Company, be directed to appear and answer this bill of complaint (but not under oath, answer under oath being expressly waived), and to abide by and perform such orders and decrees as the court may deem proper.

(b) That the defendant, The Osgood Company, and its officers, agents, servants, employees, and all persons in privity with them and each of them, be enjoined and restrained *pendente lite*, by decree and injunction of this court, from directly or contributorily infringing plaintiff's said patents Nos. 1,317,431, 1,511,114 and 1,543,250, and each of them.

(c) That the defendant, The Osgood Company, and its officers, agents, servants, employees, and all persons in privity with them; and each of them, be enjoined and restrained perpetually, by decree and injunction of this court, from directly or contributorily infringing plaintiff's said patents Nos. 1,317,431, 1,511,114 and 1,543,250 and each of them.

(d) That the defendant, The Osgood Company, be required to account to plaintiff for the profits realized by defendant and the damages to plaintiff in the premises; and that this cause be referred to a Master to take an accounting of said profits and damages; and that such damages be increased to three times the amount thereof or as to the Court may seem meet in view of all the circumstances.

(e) That said defendant be decreed to pay the costs and disbursements of this suit to be taxed.

(f) And that plaintiff have such other and further relief as to the court may seem meet.

KEYSTONE DRILLER COMPANY,
ROBERT REX DOWNIE,
Secretary.

GEO. E. KIRK, *Solicitor.*
RICHEY & WATTS, *Solicitors.*
PHILIP E. SIGGERS, *Of Counsel.*

Verification.

STATE OF OHIO,
COUNTY OF CUYAHOGA, SS:

Robert Rex Downie being duly sworn, deposes and says that he is Secretary and General Manager of the corporation, Keystone Driller Company, the plaintiff named in the foregoing bill of complaint; that he has read this bill; that the facts pleaded in this bill are within his knowledge and are true, except where alleged on information and belief and so far as they are alleged on information and belief, he is informed and that he verily believes them to be true.

ROBERT REX DOWNIE.

Subscribed and sworn to before me this 7th day of February, 1929.

FLORENCE ANN KOFSKY,
Notary Public.

(Notarial Seal).

PRINTER'S NOTE:

Copies of U. S. Patents Nos. 1,543,250 and 1,511,114 to R. R. Downie, and No. 1,317,431 to LeRoy P. Clutter were attached to this Bill of Complaint, but same have been omitted at this point, as they are listed as a part of Defendant's Exhibit No. 62.

There was also attached to the Bill of Complaint:

(1) A copy of the Final Decree in the case of *Keystone Driller Company vs. The Byers Machine Company and Byers Machine Company,* being Equity No. 2084 in the U. S. District Court, Northern District of Ohio, Eastern Division, and

(2) A copy of the Opinion of Judge Jones in the same case.

Reproduction of said Decree and Opinion at this point has been omitted to comply with the Equity Rule against duplication. For substance of same see copies attached to Bill of Complaint in case No. 964, on pages 10 and 14 of this Record.

PLAINTIFF'S INTERROGATORIES.

(Filed Feb. 9, 1929.)

[Case No. 965]

Now comes the Plaintiff and presents the following interrogatories under the Equity Rules in such cases made and provided, to be answered in writing and under oath by an officer or employee of the Plaintiff in authority, having knowledge of the facts inquired about:

(1) Did The Osgood Company, the Defendant in this case, issue the catalogs attached hereto and marked Exhibits 1 and 2 between June 23, 1925 and February 7, 1929?

(2) Did The Osgood Company issue the paper entitled "The Osgood Pictorial News" marked Exhibit No. 3, attached hereto, between June 23, 1925 and February 7, 1929?

(3) Did The Osgood Company write and dispatch the letter to Frank L. Sessions, dated November 2, 1927 and marked Exhibit No. 4, on or about November 2, 1927?

(4) Was George Day the Assistant Sales Manager of The Osgood Company about November 2, 1927?

(5) Did The Osgood Company make, sell and/or use at Marion, Ohio, or elsewhere in the Northern District of Ohio, Western Division, between June 23, 1925 and February 7, 1929 "The Back Hoe" illustrated at pages 20, 21 and the upper right-hand corner of page 23, of Exhibit No. 1, attached hereto, described on pages 20 and 21 of said Exhibit No. 1, and illustrated in Exhibit Nos. 2 and 3 attached hereto?

(6) Are the "Back Hoes" referred to in Exhibit No. 4 those illustrated and described at pages 20, 21 and illustrated on page 23 of Exhibit No. 1 and in Exhibits 2 and 3, attached hereto?

(7) Was the Defendant, The Osgood Company, making, selling and/or using, or offering for sale or use, "Back Hoes" such as are illustrated and described at pages 20, 21 and illustrated on page 23 of Exhibit No. 1 and in Exhibits 2 and 3, between January 1, 1929 and February 7, 1929?

(8) Did Defendant receive the letters, copies of which are attached to the affidavit of Philip E. Siggers filed herewith and marked Exhibits 5, 6 and 7, about or within a few days after said copies are dated?

(Note) Exhibit No. 1 is marked Bulletin No. 2620.
Exhibit No. 2 is marked Bulletin No. 2624.

KEYSTONE DRILLER COMPANY,
RICHEY & WATTS,
Solicitors.

GEO. E. KIRK,
SIGGERS & ADAMS,
Of Counsel.

It is so ordered.

GEO. P. HAHN,
U. S. District Judge.

PRINTER'S NOTE:

The original Copy of the Plaintiff's Interrogatories above had attached to it as Exhibits 1, 2, 3, 4 and 8, respectively, the following items: Osgood Bulletin No. 2620; Osgood Bulletin No. 2624; Paper entitled "The Osgood Pictorial News"; Letter from The Osgood Co. to Frank L. Sessions and Photograph No. 3364 of Excavator.

The letter, Exhibit 4, was as follows:

EXHIBIT NO. 4.

THE OSGOOD COMPANY

Marion, Ohio, U. S. A.
November 2nd, 1927.

Frank L. Sessions,
Consulting Engineer,
Rockefeller Building,
Cleveland, Ohio.

Dear Sir:

Are very glad to get your letter of November 1st, and in response we send you under separate cover today a copy of our Bulletin #2621, which illustrates the Osgood 1 Yard Heavy Duty Steam Driven Revolving Shovel, Clamshell Outfit, Dragline Rig or Crane, mounted upon Continuous Treads (Caterpillars).

We also forward you our Bulletins #2620 and #2624, which show and describe respectively the Osgood 1-Yard and 1¼ Yard Revolving Units, available for use.

as shovels, clamshell outfits, dragline rigs, back hoes or cranes, these machines being driven by either gas engine or single electric motor, and mounted upon Continuous Treads.

The copy of Osgood Pictorial News, which we attach, will show you some interesting views of our machines variously equipped, working in many different parts of the country.

The Photograph #3364 will particularly interest you, perhaps, as it shows the Osgood 1 Yard Gas Machine equipped as a back hoe. Rigged in this manner, we have Osgoods working all over the country, digging ditches of various sizes, and any place where a trench machine, that is—the ladder type machine, will not work, due to the hardness of the ground or the presence of boulders, etc., then this back hoe of ours is, we think, the most efficient tool which can be used.

Of course, in addition to digging ground which the trench machine cannot dig, it will do anything that a trench machine will do, and some things that the trench machine will not do, and because of its ability to dig both hard and soft ground, and to excavate trenches of various widths and depths; it is coming into great favor among sewer diggers and contractors who specialize in laying water mains, throughout the country.

The Photograph #3394 gives a good view of an Osgood 1 Yard Gas Machine as a shovel. This illustration will make it clear that the Osgood Gas Outfit can move rock as it does clay, gravel, and other materials. We speak of this because there was a feeling at the time the gas shovel was brought out, that while it might do in soft material, yet it might not handle rock to good advantage. Insofar as the Osgood Machine is concerned, this has not proven to be the case as our rig is handling rock at many different points in an economical way.

The Photograph #3353 shows another Osgood Gas Machine arranged as a crane. You will note that this unit also handles a clamshell bucket, the bucket being shown alongside the machine, this particular outfit excavating for the large sewer and then switching over from handling the clamshell bucket to handling the concrete bucket, depositing the concrete into the form.

Our Machine is equally efficient as a dragline outfit, doing ditch work, that is open drainage ditch work, in a number of different instances, at satisfactory cost to the owner.

Are not sure, Mr. Sessions, as to whether you are a contractor, as well as a consulting engineer, but whether you are interested in a steam, gas or electrically driven revolving outfit for yourself or for your clients, we are glad of course to put this preliminary information in your hands, and it will be a distinct pleasure to call upon you the first time our Mr. B. F. Tedlie is in Cleveland, which we expect will be either the latter part of this, or the first of next week, so we may have the pleasure of going into this with you in more detail.

In the meantime, should it happen that you are immediately interested in price and full particulars covering any of the types of Osgood shown, please let us know, and we will instantly write you giving specific information upon the machines you are interested in.

Awaiting the opportunity to serve you further, we are

Yours truly,

THE OSGOOD COMPANY,
GEO. DAY,
Asst. Sales Manager.

GD:TIG
Inc. OPN
Photo #3364
Photo #3394
Photo #3353

AFFIDAVIT OF ROBERT REX DOWNIE.

(Filed Feb. 9, 1929.)

[Case No. 965]

STATE OF OHIO,
COUNTY OF CUYAHOGA, SS.:

ROBERT REX DOWNIE, being duly sworn, deposes and says:

I am Secretary and General Manager of the Plaintiff Company and experienced in machines to which this suit relates and in the operation of the same. I testified in the case of Keystone Driller Company vs. The Byers

Machine Company and Byers Machine Company, which was tried in the Eastern Division of the Northern District of Ohio, and which is referred to in the Bill of Complaint herein.

I have long known of The Osgood Company of Marion, Ohio, the Defendant in this case, which is one of the competitors of the Plaintiff and the two Byers Companies.

I have examined the "Back Hoe" illustrated and described on pages 20 and 21 and illustrated on page 23 of Bulletin No. 2620 of The Osgood Company, marked "Exhibit 1" and attached to the Plaintiff's interrogatories filed herewith. I have also examined the same machine illustrated in Exhibits 2, 3 and 8 attached to said Plaintiff's interrogatories. I have seen a number of these machines in operation at various times and various places in the northeastern part of the United States within the last two years, performing work of various kinds including the digging of trenches and ditches, digging in rocky ground, etc. I have examined the machines very closely at these times. Within the last week I saw one of these machines at Bloomfield, New Jersey. All of the Defendant's machines, which I saw, contained the elements, or the equivalents thereof, of the Plaintiff's commercial and Byers machines and, in my opinion, contained the elements or the equivalents thereof, recited in the claims of the patents relied upon here. All of the Defendant's machines which I saw operated, operated precisely like and performed all of the important and most of the other functions of the machines of the patents in suit, the Plaintiff's machine and the machines of the two Byers Companies which were held to infringe by His Honor Judge Jones in the Cleveland case. In my opinion, the Defendant Osgood machines, the Plaintiff's commercial and the Byers' commercial machines are the same in substance. All are used for the same purpose and in competition with each other.

I am informed and believe that the machines illustrated in Exhibits 1, 2 and 3, which I saw operating, were manufactured and sold by The Osgood Company at Marion, Ohio. Name plates bearing the words, "The Osgood Company, Marion, Ohio" were attached to the machines I saw and to which I refer. I am further informed and believe that The Osgood Company is now manufacturing, advertising for sale and preparing to continue to manufacture and sell the machines illustrated in Exhibits 1, 2, 3 and 8, all at Marion, Ohio.

The Osgood Company, the Defendant herein, has been notified not only of its infringement of the patents, but of the opinion of Judge Jones and the decree entered in the Cleveland case. The Defendant has continued to infringe the patents and I am informed and believe, is threatening to continue to infringe them notwithstanding such notices.

Plaintiff developed the machines covered by the patents not only mechanically but commercially. Plaintiff built up the business in these machines from nothing to a large number over a period of years. During this development, the Plaintiff also developed the factory, sales and other organization facilities necessary to take care of the business in these machines. After the infringement of this Defendant began, the business of the Plaintiff in these machines declined and it now finds itself with a surplusage of manufacturing, sales and other organization facilities which it will be unable to maintain and continue unless the infringement of the Defendant is abated. During the year before the infringement of the patents in suit became destructive of Plaintiff's sales, the Plaintiff made about Three Hundred Thousand Dollars ($300,000.00) on the patented machines and the handling machines which are sold with them. During 1928, this profit had been cut down to about Thirty Thousand Dollars ($30,000.00) by the infringers of whom the Defendant was and now is one. In addition to this loss of profits Plaintiff has suffered damages from such infringement which it is difficult to estimate. Every time the Defendant sells an infringing machine, a new infringer is created in the user, whom it is difficult to pursue and from whom it is difficult to recover for the infringement. Other manufacturers, seeing the infringement of this Defendant, have been encouraged by Defendant's infringement and have also infringed the patents, and others undoubtedly will follow unless Defendant is enjoined. The present organization and equipment of the Plaintiff is more than ample to supply the demand of the public for these machines. Unless the infringement of the patents can be abated, the Plaintiff will be obliged to reduce its establishment and organization on account of the infringing competition. On the other hand, as shown by the catalogs, the Defendant manufactures many other types of excavating machinery, which it can continue to make and sell even though enjoined from infringing the patents in suit. Issue of the pre-

liminary injunction asked for will merely restore Defendant to its pre-infringing status.

The suit in Cleveland was instituted in Dec. of 1926 was tried in 1927 before His Honor Judge Westenhaver, but due to Judge Westenhaver's sickness and death, the case was not decided until January, 1929, so that there has unfortunately and unavoidably already been unusual delay in proceeding to enforce the patents. Plaintiff has proceeded as fast as it could under the circumstances.

Unless the Preliminary Injunction here asked for is granted, the Plaintiff will suffer irreparable damages.

ROBERT REX DOWNIE.

Subscribed and sworn to before me this 7th day of February, 1929.

FLORENCE ANN KOFSKY,
Notary Public.

(Notarial Seal)

AFFIDAVIT OF PHILIP E. SIGGERS.

(Filed Feb. 9, 1929.)

[Case No. 965]

COUNTY OF CUYAHOGA,
STATE OF OHIO, ss.

Philip E. Siggers, being duly sworn, deposes and says that he is of counsel for the Keystone Driller Company, plaintiff in this case; that on November 10, 1927, he notified The Osgood Company of Marion, Ohio, defendant in this case, by letter, of its infringement of patents Nos. 1,317,431, 1,511,114 and 1,543,250 and of the ownership of said patents by the plaintiff; that Exhibit 5, attached hereto is a true copy of the letter sent defendant on November 10, 1927; that defendant acknowledged in writing receipt of the notice; that on January 24, 1929, he notified defendant by letter which he

deposited in the mails that day of the opinion of January 23, 1929 of the District Court of the United States for the Northern District of Ohio, Eastern Division sustaining the validity of claim 4 of patent No. 1,317,431, claims 1 to 14 inclusive of patent No. 1,511,114, and claims 1 to 10 inclusive of patent No. 1,543,250; that attached Exhibit 6 is a true copy of the notification of January 24, 1929; that said defendant, to his personal knowledge, was notified of its infringement of patents Nos. 1,317,431, 1,511,114 and 1,543,250 and also of the intention of the Keystone Driller Company to bring suit shortly and ask for preliminary injunction, said notification being by letter dated and mailed January 31, 1929 from the office of F. O. Richey, Cleveland, Ohio, also of counsel for plaintiff; that attached Exhibit 7 is a true copy of the notification of January 31, 1929; and that defendant, The Osgood Company, has never to his knowledge, offered to settle for past infringement, nor has it ceased its infringing acts but on the contrary it has continued to make offers to sell machines infringing claims held valid by decree of the District Court of the United States for the Northern District of Ohio, Eastern Division.

PHILIP E. SIGGERS.

Sworn to and subscribed before me this 7th day of February 1929.

FLORENCE ANN KOFSKY,
Notary Public.

(Notarial Seal)

EXHIBIT 5.

COPY

November 10, 1927.

The Osgood Co.,
Marion, Ohio.

Re: File 1159 Osgood

Gentlemen:—

This is to notify you formally of your infringement of the following patents owned by the Keystone Driller Company:

1,511,114	Downie	October 7, 1924
1,317,431	Clutter	September 30, 1919
1,543,250.	Downie	June 23, 1925

Since obtaining title to the above patents, the Keystone Driller Company has notified the public of its rights by attaching to each of its machines metal plates bearing the dates (and recently the numbers also) of said patents, as well as of other patents owned by it. As a member of the public, you have thus received constructive notice of the rights of the Keystone Driller Company arising from the issue of the above-identified patents. Furthermore, Keystone Driller machines bearing patent notices have been exhibited at the Chicago road shows for a number of years past.

As you well know, the Keystone Driller Company is now prosecuting a suit for infringement of the above-named patents against the Byers Machine Company in the United States District Court in Cleveland. You have aided the Byers Company in its defense by sending a witness (your Mr. Sauer) to Cleveland; and in open court he has admitted your present infringement. Unless you are prepared to make an accounting for past infringement, or unless you enter into some amicable agreement with the Keystone Driller Company, a suit for infringement may be brought against you to recover profits or damages and to obtain injunctive relief.

A written response to this letter is requested.

Very truly yours,

PES:B Signed—PHILIP E. SIGGERS.

EXHIBIT 6.

COPY

January 24, 1929

The Osgood Company, Marion, Ohio.

Re: File 1159

Gentlemen:—

We are writing merely to inform you of the decision of the District Court of the United States for the Northern District of Ohio, Eastern Division, at Cleveland, upholding the validity of the following claims of patents owned by the Keystone Driller Company:

Claim 4 of Clutter patent	1,317,431
Claims 6 and 7 of Wagner et al.	1,476,121
Claims 1-14 incl. of Downie	1,511,114
Claims 1-10 incl. of Downie	1,543,250

All these claims were held to be infringed by Byers Machine Company. None of the claims sued on was held invalid.

A copy of the court's decision may be obtained from the clerk of the court at Cleveland, from this office or from the Keystone Driller Company, Beaver Falls, Pa.

Very truly yours,

PES:B Signed—SIGGERS AND ADAMS.

EXHIBIT 7.

COPY

January 31, 1929

Osgood Company, Marion, Ohio.

Gentlemen:—

This will follow the letter of January 24, 1929 written to you by Siggers & Adams from Washington, D. C., and is written in connection with that letter and also the letter of Philip E. Siggers of November 10, 1927 to you. This letter is, as those letters were, written at the direction of the Keystone Driller Company and is for the purpose of advising you that you are infringing the following patents owned by the Keystone Driller Company:

Clutter	No. 1,317,431
Downie	No. 1,511,114
Downie	No. 1,543,250

and further to advise you that we will shortly file a Bill of Complaint against you asking for preliminary injunction, enjoining you from infringing the above named patents which, as Siggers & Adams wrote you, have been sustained by His Honor Judge Jones in the United States District Court for the Northern District of Ohio, unless in the meantime you agree to discontinue your infringement and make suitable settlement for past infringement.

Very truly yours,

Signed—F. O. RICHEY.

MOTION FOR PRELIMINARY INJUNCTION.

(Filed Feb. 9, 1929.)

[Case No. 965]

To the Honorable Judges of the United States District Court for the Northern District of Ohio, Western Division:

Now comes the Plaintiff, and moves this Court, on the Bill of Complaint, the affidavits of Robert Rex Downie and Phillip E. Siggers and the records and exhibits, the pleadings, the opinion and the decree in the case of Keystone Driller Company vs. The Byers Machine Company and Byers Machine Company, which was instituted, pended, tried and decided in the Eastern Division of the Northern District of Ohio, for preliminary injunction restraining the Defendant, its confederates, associates, servants, attorneys, agents, clerks and workmen, as prayed for in the Bill of Complaint, from further infringing Letters Patent of the United States to Clutter, No. 1,317,431. Downie, 1,511,114 and Downie, 1,543,250, and for such other and further relief as may seem adequate to the Court.

Plaintiff shows in support of this motion that the title of the said patents as shown in the suit in the Eastern Division of the Northern District, is in the Plaintiff and that the said patents were sustained by His Honor Judge Paul Jones in the Eastern Division of the Northern District of Ohio, and that as shown by the affidavits of Robert Rex Downie and Phillip E. Siggers, and the Bulletins of the Defendant filed with the Bill of Complaint, that the Defendant is infringing claims which were held valid in said case of the Plaintiff vs. The Byers Machine Company and Byers Machine Company as aforesaid.

Plaintiff files herewith an Order to Show Cause why this motion should not be granted and such injunction issued.

RICHEY & WATTS,
Solicitors for Plaintiff.

GEO. E. KIRK,
SIGGERS AND ADAMS,
Of Counsel for Plaintiff.

Toledo, Ohio, February 8, 1929.

ORDER TO SHOW CAUSE.

(Entered Feb. 9, 1929, by Geo. P. Hahn, Judge.)

[Case No. 965]

Upon reading the Bill of Complaint, now on file, and upon considering the affidavits of Robert Rex Downie and Philip E. Siggers, and the exhibits referred to in the said affidavits and filed herein in support of this motion, and a copy of the opinion and decree of Judge Paul Jones in the case of the Keystone Driller Company vs. The Byers Machine Company and Byers Machine Company it is ordered:

That the Defendant show cause, if any it has, before this Court, at a session thereof to be held in the City of Toledo, State of Ohio, on the 25th day of February, 1929, at 9:30 o'clock forenoon, or as soon thereafter as counsel can be heard, why a preliminary injunction should not issue pursuant to the prayer of said Bill of Complaint;

That copies of the said Bill of Complaint and of Plaintiff's motion papers and affidavits be served upon Defendant with this order;

That Defendant serve copies of all papers proposed to be used in opposition to the motion for a preliminary injunction upon Plaintiff's solicitors, Richey & Watts, 766 Union Trust Bldg., Cleveland, Ohio, by leaving said copies at said office or by mailing them by registered mail so as to reach said office at or before 4:00 P. M., February 18th, 1929;

And that Plaintiff serve copies of all papers in rebuttal upon Defendant, not later than the second day preceding the above named return day of this order;

That service of copies of this order and the attached affidavits upon counsel for Defendant on or before the 11th day of February, 1929, be deemed sufficient service.

GEO. P. HAHN,
United States District Judge.

Toledo, Ohio, February 9th, 1929.

ORDER MODIFYING THE DATES IN THE ORDER TO SHOW CAUSE.

(Entered Feb. 16, 1929, by Geo. P. Hahn, Judge.)

[Case No. 965]

It is hereby ordered that the Defendant's time for serving copies of all papers proposed to be used in opposition to the Motion for a Preliminary Injunction upon Plaintiff's solicitors, Richey & Watts, 766 Union Trust Bldg., Cleveland, Ohio, by leaving said copies at said office or mailing them by registered mail so as to reach said office, be extended to 4:00 P. M., February 25, 1929; the time for serving copies of Plaintiff's rebuttal papers be extended until March 5, 1929 and the hearing which is now set for the 25th day of February upon the Motion for a Preliminary Injunction be postponed until March 8, 1929.

GEO. P. HAHN,
United States District Judge.

We assent to the entry of the above order.

RICHEY & WATTS,
Solicitors for Plaintiff.

EDWIN P. CORBETT,
Solicitor for Defendant.

GEDDES, SCHMETTAU, WILLIAMS, EVERSMAN & MORGAN,
Solicitors for Defendant.

ORDER MODIFYING THE DATES IN THE ORDER TO SHOW CAUSE.

(Entered Feb. 20, 1929, by Geo. P. Hahn, Judge.)

[Case No. 965]

It is hereby ordered that the Defendant's time for serving copies of all papers proposed to be used in opposition to the Motion for a Preliminary Injunction upon Plaintiff's solicitors, Richey & Watts, 766 Union Trust Bldg., Cleveland, Ohio, by leaving said copies at said office or mailing them by registered mail so as to reach said

office, be extended to 4:00 P. M., March 11, 1929; the time for serving copies of Plaintiff's rebuttal papers be extended until March 19, 1929, and the hearing which is now set for the 8th day of March upon the Motion for a Preliminary Injunction be postponed until March 22, 1929.

GEO. P. HAHN,
United States District Judge.

OBJECTIONS TO PLAINTIFF'S INTERROGATORIES.

(Filed Feb. 26, 1929.)

[Case No. 965]

Each and all of the Interrogatories filed herein by plaintiff are objected to because of the fact that the Bill of Complaint prays for "trebled damages." Increased damages are in the nature of a penalty, and it is a settled law that a Court of Equity will not compel discovery by the party if such discovery may subject such party to a penalty.

The defendant, therefore, respectfully requests the Court, that an order be entered to the effect, that the defendant need not answer any of the Interrogatories propounded by plaintiff herein unless and until all claims for any such increased damages be abandoned by plaintiff and withdrawn from its Bill of Complaint.

Respectfully submitted,
EDWIN P. CORBETT,
Attorney for Defendant.

LLOYD I. WILLIAMS,
Solicitor for Defendant.

PLAINTIFF'S ANSWER TO DEFENDANT'S OBJECTION TO PLAINTIFF'S INTERROGATORIES.

(Filed Mar. 5, 1929.)

[Case No. 965]

Plaintiff's Interrogatories are, in accordance with General Equity Rule 58, directed to an officer or employee of a corporation, a different party from the corporation itself.

Defendant objects to the Interrogatories on the grounds that treble damages are asked for against the Defendant, a corporation, in the Bill of Complaint and therefore the action is penal.

The Plaintiff is one party, the Defendant is another party and the officer or employee to whom the Interrogatories are directed is a third party, distinct from each Plaintiff and Defendant.

While it may be well established that the Defendant in a patent case against whom treble damages are asked may not be required to answer interrogatories on the grounds that the action is penal, it is equally well established that a third party, such as an officer of a corporation can not be excused from answering Interrogatories because the complaint asks for treble damages of the corporation.

This general rule of law was stated by Mr. Justice Brown for the Supreme Court of the United States, in *Hale vs. Hinkle,* 201 U. S. 43, 50 Fed. 652, 663, as follows:

> "It was never intended to permit him to plead the fact that *some third person might be incriminated by his testimony,* even though he were the agent of such person. A privilege so extensive might be used to put a stop to the examination of every witness who was called upon to testify before the grand jury with regard to the doings or business of his principal, whether such principal were an individual or a corporation. The question whether a corporation is a 'person' within the meaning of this amendment really does not arise, except, perhaps where a corporation is called upon to answer a bill of discovery, since it can only be heard by oral evidence in the person of some one of its agents or employees. The amendment is limited to a person who shall be compelled in any criminal case to be a witness against himself; *and if he cannot set up the privilege*

of a third person, he certainly cannot set up the privilege of a corporation."

The rule thus expressed was applied to Interrogatories in a patent case by Judge Learned Hand in the Southern District of New York, in *Grasselli vs. National,* 282 Fed. 378, to quote the syllabus as follows:

"In a suit for infringement of a patent, and for treble damages, the defendant's claim of privilege to refuse to answer interrogatories as to infringement, on the ground that the action was penal, cannot be considered; the defendant being a corporation."

See also, *Smith v. Interstate,* 245 U. S. 42. *Livesey vs. United States,* 279 Fed. 499. *United Mine Workers v. Coronado Coal Company,* 258 Fed. 834. *In Re, Rosenwasser,* 254 Fed. 173, *Nekossa v. News,* 182, N. W. 922.

We see no need of an oral hearing on these objections or of waiting until the 22nd day of March for a disposition of the matter.

Respectfully submitted,
RICHEY & WATTS,
Solicitors for Plaintiff.

We have mailed a copy of this answer to Mr. Edwin P. Corbett, counsel for the defendant.

RICHEY & WATTS.

STIPULATION EXTENDING TIME TO ANSWER UNTIL APRIL 3, 1929.

(Filed March 9, 1929.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that the time for filing answer herein may be, and hereby

is extended thirty (30) days or to and including April 3, 1929.

RICHEY & WATTS,
Attorneys for Plaintiff.

Dated March 2, 1929.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated February 28, 1929.

Consent to the above extension is hereby granted.

GEO. P. HAHN,
District Judge.

March 9, 1929.

ORDER MODIFYING THE DATES IN THE ORDER TO SHOW CAUSE.

(Entered March 9, 1929, by Geo. P. Hahn, Judge.)

[Case No. 965]

It is hereby ordered that the Defendant's time for serving copies of all papers proposed to be used in opposition to the Motion for a Preliminary Injunction upon Plaintiff's solicitors, Richey & Watts, 766 Union Trust Building, Cleveland, Ohio, by leaving said copies at said office or mailing them by registered mail so as to reach said office, be extended to 4:00 P. M., March 25, 1929; the time for serving copies of Plaintiff's rebuttal papers be extended until April 2, 1929, and the hearing which is now set for the 22nd day of March upon the Motion for a Preliminary Injunction be postponed until April 8, 1929.

GEO. P. HAHN,
United States District Judge.

March 19, 1929.

ORDER EXTENDING PLAINTIFF'S TIME FOR SERVING REBUTTAL PAPERS.

(Entered March 28, 1929, by Geo. P. Hahn, Judge.)

[Case No. 965]

It is hereby ordered that the plaintiff's time for serving copies of rebuttal papers proposed to be used in the matter of the motion for a preliminary injunction be extended from April 2, 1929, to April 16, 1929, and the hearing which is now set for the 8th of April, 1929, upon the motion for a preliminary injunction be postponed until April 22, 1929.

GEO. P. HAHN,

March 28, 1929. *United States District Judge.*

Approved as to form:

LLOYD I. WILLIAMS,

Of Counsel for Defendant.

ANSWER OF THE OSGOOD COMPANY.

(Filed April 3, 1929.)

[Case No. 965]

Answer of The Osgood Company to the bill of complaint of the Keystone Driller Company in the above entitled cause:

I.

The defendant has no knowledge, save by the bill of complaint, and therefore denies that the plaintiff is a corporation of the State of Pennsylvania having its principal place of business at Beaver Falls, Pennsylvania, and that it is a citizen and inhabitant of said state.

II.

Defendant admits that it is a corporation of the State of Ohio, having its principal place of business at Marion, Marion County, Ohio, and that it is a citizen and inhabitant of said State of Ohio and of the Northern District of Ohio, Western Division.

III.

Defendant admits that the Court's jurisdiction in this cause is based upon the ground that the suit is one for alleged infringement of United States patents, and that the defendant is an inhabitant of the Northern District of Ohio, Western Division, and that it has a regular and established place of business in said district, but denies that it has committed acts of infringement in said district or elsewhere, or that plaintiff is entitled to equitable relief, or any relief herein.

IV.

Defendant admits that on February 11, 1915, Le Roy P. Clutter filed in the United States Patent Office an application for Letters Patent, on Ditching or Excavating Machines, but defendant denies all of the other allegations of paragraph III of said bill of complaint.

V.

Defendant admits that upon September 30, 1919, United States Letters Patent No. 1,317,431 was issued to said Le Roy P. Clutter upon said application for Ditching or Excavating Machines, but defendant denies all of the other allegations of paragraph IV of the bill of complaint.

VI.

Defendant has no knowledge, save by bill of complaint, of the allegations contained in paragraph V, and therefore denies the same, and leaves the plaintiff to its proof.

VII.

Defendant denies that the alleged invention and improvement described and claimed in said Letters Patent 1,317,431, contains and embodies any material beneficial advance over what has previously been known to those skilled in the art, but, on the contrary, avers the fact to be that the claims of said Letters Patent and each of them are invalid and void on the following grounds:

(a) Because the said Le Roy P. Clutter was not the original and first inventor or discoverer of the invention alleged to be described and claimed in the said Letters Patent, or of any material or substantial part thereof, but that the same, and all material or substantial parts thereof, had been patented or described in patents filed prior to the date of the alleged invention of the said Le Roy P. Clutter; and that said patent is void and invalid because the alleged invention has been patented or described in printed publications prior to said Clutter's supposed invention or discovery thereof, or more than two years prior to his application for a patent therefor, as follows:

UNITED STATES PATENTS

Patentee	*No.*	*Issued*
F. Milliken	433,087	May 26, 1891
G. W. King	580,494	April 13, 1897
A. N. Simmerly	323,538	Aug. 4, 1885
C. Hetlesaeter	659,630	Oct. 9, 1900
E. S. Robertson	929,168	July 27, 1909
J. W. Dutton	776,125	Nov. 29, 1904
O. J. Martinson	976,088	Nov. 15, 1910
S. M. Bishop	1,100,864	June 23, 1914
O. N. Gardner	1,077,467	Nov. 4, 1913
M. G. Bunnell	1,037,429	Sept. 3, 1912
H. L. & W. Sweet et al.	1,208,230	Dec. 12, 1916
L. P. Clutter	1,288,514	Dec. 24, 1918
	(Filed Aug. 29, 1913.)	
D. H. Mahoney	1,194,204	Aug. 8, 1916
	(Filed Feb. 10, 1915.)	

FOREIGN PATENTS.

Great Britain	H. W. J. Cheffins	6266 of 1889

PUBLICATIONS.

Pages 318-319, Engineering News, March 16, 1911.

Also in many other Letters Patent and printed publications not known to the defendant but, which when discovered hereafter, defendant prays leave of the Court to furnish and concerning which defendant prays leave to incorporate data in this, its Answer, by suitable amendment thereof.

(b) Because, in view of the state of the art in respect to the device disclosed and claimed in said Letters

Patent, prior to, or at the time of, the alleged invention of the said Le Roy P. Clutter, as described and claimed in Letters Patent No. 1,317,431, the supposed improvement described and claimed in said Letters Patent was not a patentable invention, discovery or improvement, but comprised mere selections and adaptations from prior known structures requiring no invention but being within the domain of mere judgment and mechanical skill.

VIII.

Defendant avers that the alleged invention and improvement described and claimed in said Letters Patent 1,317,431, and all substantial and material parts thereof were publicly known to and used by the following persons at the places indicated prior to any invention thereof by the said Le Roy P. Clutter, and more than two years prior to the filing of an application for said Letters Patent.

A "Libbe Excavator" manufactured by J. H. W. Libbe, of Toledo, Ohio, first used publicly at Cincinnati, Ohio, by J. H. W. Libbe. This machine was later sold to Smith & Paxton at Columbus, Ohio. Both the use and sale of this machine occurred more than two years prior to the filing date of the Clutter patent in suit.

An excavator which was manufactured by The Vulcan Iron Works Company of Toledo, Ohio, and which was publicly used by said company at Toledo, Ohio.

A "Gopher Traction Dry-Land Ditching Machine," manufactured by the Dix Machine Company of Stillwater, Minn., which was publicly used at Hugo, Minnesota, by the said Company.

A "Back Acting Shovel" manufactured by the Marion Steam Shovel Company of Marion, Ohio, which was publicly used by the Charleston South Carolina Mining & Manufacturing Company of Fetteressa, S. C., at Barstow, Florida.

An "E. O. Rood Ditcher Machine" owned by James McGinnis of Champaign, Illinois, which was publicly used by said McGinnis in Champaign County, Illinois.

A "Rood Excavating Machine" manufactured by the Rood Construction Company of Grand Rapids, Wisconsin, which was publicly used at Coal City, Illinois, by Charles W. Rood.

A "Fairbanks Dry Land Excavator," owned by George A. Castle of Crookston, Minnesota, which was publicly used by said Castle in Polk County, Minnesota.

Daniel H. Mahoney of North Bend, Ohio, at Vincennes, Ind.

And to and by others whose names and residences, and the place of use or knowledge by them defendant begs leave to set up herein by amendment or otherwise when it has more fully ascertained the same.

IX.

Defendant admits that on June 27, 1921, Robert Rex Downie made application for United States Letters Patent on alleged Improvements in Excavating Machines, but defendant denies all of the other allegations of paragraph VI of the bill of complaint.

X.

Defendant has no knowledge, save by bill of complaint, of the allegations contained in paragraph VII, and therefore denies the same, and leaves the plaintiff to its proof.

XI.

Defendant admits that upon October 7, 1924, United States Letters Patent, No. 1,511,114, was issued to the Keystone Driller Comany upon said Downie application for alleged Improvements in Excavating Machines, as alleged assignee of said Robert Rex Downie, but defendant denies all of the other allegations of paragraph VIII of the bill of complaint.

XII.

Defendant denies that the alleged invention and improvement described and claimed in said Letters Patent 1,511,114, contains and embodies any material beneficial advance over what has previously been known to those skilled in the art, but, on the contrary, avers the fact to be that the claims of said Letters Patent and each of them are invalid and void on the following grounds:

(a) Because the said Robert Rex Downie was not the original and first inventor or discoverer of the invention alleged to be described and claimed in the said Letters Patent, or of any material or substantial part thereof, but that the same, and all material or substantial parts thereof, had been patented or described in patents filed prior to the date of the alleged invention of the said Robert Rex Downie; and that said patent is void and invalid because the alleged invention has been patented or described in printed publications prior to said

Downie's supposed invention or discovery thereof, or more than two years prior to his application for a patent therefor, as follows:

UNITED STATES PATENTS.

Patentee	*No.*	*Issued*
S. Hoar	1,322,570	Nov. 5, 1919
M. E. Pugh	806,288	Dec. 5, 1905
H. G. Butler	519,835	May 15, 1894
D. H. Mahoney	1,194,204	Aug. 8, 1916
C. N. Hudson	1,281,379	Oct. 15, 1918
E. J. Keith	1,315,512	Sept. 9, 1919
S. M. Bishop	1,100,864	June 23, 1914
L. P. Clutter	1,317,431	Sept. 30, 1919
J. C. French	1,430,542 (Filed Jan. 26, 1918)	Oct. 3, 1922
C. M. Hoffmeyer	1,385,322 (Filed Mar. 24, 1917)	July 19, 1921
G. A. Morrison et al.	1,249,805	Dec. 11, 1917
B. H. Coffey	745,329	Dec. 1, 1903
J. H. W. Libbe	820,055	May 8, 1906
J. L. Potter	970,750	Sept. 20, 1910
O. J. Olson	826,051	July 17, 1906
J. C. Boehm	999,953	Aug. 8, 1911
W. Shannon	670,210	Mar. 19, 1901
E. J. Davy	508,685	Nov. 14, 1893
N. H. Nelson	842,904	Feb. 5, 1907
G. W. King	580,494	April 13, 1897
J. G. Fairbanks	892,508	July 7, 1908
O. Hetlesaeter	659,632	Oct. 9, 1900
E. Barnes	77,949	May 19, 1868
M. E. Pugh	1,316,058	Sept. 16, 1919
A. N. Cross	808,345	Dec. 26, 1905
G. H. Hulett	495,040	April 11, 1893
V. H. Anderson	1,269,149	June 11, 1918
E. O. Rood	386,438	July 17, 1888
A. N. Cross	418,311	Dec. 31, 1889
G. H. Williams	711,449	Oct. 14, 1902
J. H. W. Libbe	645,175	Mar. 13, 1900
C. L. Baker	881,529	Mar. 10, 1908
R. M. Downie	1,228,654	June 5, 1917
E. J. Armstrong et al.	1,239,554	Sept. 11, 1917
M. E. Pugh	1,339,606	May 11, 1920

FOREIGN PATENTS.

Great Britain	H. W. J. Cheffins	6266 of 1899

PUBLICATIONS.

Pages 318-319, Fig. 2 and description, Engineering News, March 16, 1911.

Page 55 and adjacent page, Marion Steam Shovel Co. catalog, published in 1900.

Pages 158 and 159, Engineering News, of Sept. 5, 1895.

Page 497, The Railway Review, of Sept. 7, 1895.

Pages 158-159, article and Illustrations entitled "Steam Shovels for Trench Excavation and Backfilling," Engineering News, Sept. 5, 1895.

Page 46, of the catalog of The Fairbanks Steam Shovel Co., Marion, Ohio, published 1912.

Also in many other Letters Patent and printed publications not known to the defendant but, which when discovered hereafter, defendant prays leave of the Court to furnish and concerning which defendant prays leave to incorporate data in this, its Answer, by suitable amendment thereof.

(b) Because, in view of the state of the art in respect to the device disclosed and claimed in said Letters Patent, prior to, or at the time of, the alleged invention of the said Robert Rex Downie, as described and claimed in Letters Patent No. 1,511,114, the supposed improvement described and claimed in said Letters Patent was not a patentable invention, discovery or improvement, but comprised mere selections and adaptations from prior known structures requiring no invention but being within the domain of mere judgment and mechanical skill.

XIII.

Defendant avers that the alleged invention and improvement described and claimed in said Letters Patent 1,511,114, and all substantial and material parts thereof were publicly known to and used by the following persons at the places indicated prior to any invention thereof by the said Robert Rex Downie, and more than two years prior to the filing of an application for said Letters Patent.

A "Mahoney Excavating Machine of the Back-Hoe Type," manufactured by The Mahoney Railroad Ditching Machine Co., Vincennes, Indiana, was publicly operated by D. H. Mahoney of North Bend, Ohio, on a farm situated a short distance from the City of Vincennes.

A "J. C. French Swinging Scoop Excavator" was publicly used around Toms River, N. J., by a Clay Company located in the vicinity of Newark, N. J.

A "Keith Ditch Digging Machine," was publicly used around Sikeston, Missouri, by E. J. Keith, such use being more than two years prior to the filing date of the Downie patent in suit.

An excavator which was manufactured by The Vulcan Iron Works Co. of Toledo, Ohio, and which was publicly used by said company at Toledo, Ohio.

A "Back Acting Shovel" manufactured by the Marion Steam Shovel Co. of Marion, Ohio, which was publicly used by the Charleston, South Carolina Mining and Manufacturing Co. of Fetteressa, S. C., at Barstow, Florida.

A "E. O. Rood Ditcher Machine" owned by James McGinnis of Champaign, Illinois, which was publicly used by said McGinnis in Champaign County, Illinois.

A "Fairbanks Dry Land Excavator," owned by George A. Castle of Crookston, Minn., which was publicly used by said Castle in Polk County, Minn.

And to and by others whose names and residences, and the place of use or knowledge by them defendant begs leave to set up herein by amendment or otherwise when it has more fully ascertained the same.

XIV.

Defendant admits that on January 8, 1925, Robert Rex Downie made application for United States Letters Patent on an Excavating Machine, but defendant denies all of the other allegations of paragraph IX of the bill of complaint.

XV.

Defendant has no knowledge, save by the bill of complaint, of the allegations contained in paragraph X, and therefore denies the same, and leaves the plaintiff to its proof.

XVI.

Defendant admits that upon June 23, 1925, United States Letters Patent No. 1,543,250, was issued to the Keystone Driller Company, upon said Downie application for an Excavating Machine, as alleged assignee of the said Robert Rex Downie, but defendant denies all of the other allegations of paragraph XI of the bill of complaint.

XVII.

Defendant has no knowledge, save by the bill of complaint, of the allegations contained in paragraph XII,

and therefore denies the same, and leaves the plaintiff to its proof.

XVIII.

Defendant denies that the alleged invention and improvement described and claimed in said Letters Patent 1,543,250, contains and embodies any material beneficial advance over what has previously been known to those skilled in the art, but, on the contrary, avers the fact to be that the claims of said Letters Patent and each of them are invalid and void on the following grounds:

(a) Because the said Robert Rex Downie was not the original and first inventor or discoverer of the invention alleged to be described and claimed in the said Letters Patent, or of any material or substantial part thereof, but that the same, and all material or substantial parts thereof, had been patented or described in patents filed prior to the date of the alleged invention of the said Robert Rex Downie; and that said patent is void and invalid because the alleged invention has been patented or described in printed publications prior to said Downie's supposed invention or discovery thereof, or more than two years prior to his application for a patent therefor, as follows:

UNITED STATES PATENTS

Patentee	*No.*	*Issued*
C. M. Hoffmeyer	1,385,322	July 19, 1921
D. H. Mahoney	1,194,204	Aug. 8, 1916
S. M. Bishop	1,100,864	June 23, 1914
C. N. Hudson	1,281,379	Oct. 15, 1918
J. G. Fairbanks	1,056,268	Mar. 18, 1913
J. C. French	1,430,542	Oct. 3, 1922
L. P. Clutter	1,317,431	Sept. 30, 1919
M. E. Pugh	1,489,042	April 1, 1924
V. G. Anderson	1,269,149	June 11, 1918
A. N. Cross	418,311	Dec. 31, 1889
A. N. Cross	808,345	Dec. 26, 1905
E. B. & D. S. White	251,394	Dec. 27, 1881
D. S. White	367,567	Aug. 2, 1887
B. C. Clutter	1,561,694	Nov. 17, 1925
(Filed May 26, 1923)		
G. E. Wagner	1,225,537	May 8, 1917
P. Burke	1,474,314	Nov. 13, 1923

C. W. Rood	1,057,457	April 1, 1913
P. Burke	1,562,288	Nov. 17, 1925
	(Filed Aug. 2, 1924)	
J. J. Benedick	876,517	Jan. 14, 1908

Also in many other Letters Patent and printed publications not known to the defendant but, which when discovered hereafter, defendant prays leave of the Court to furnish and concerning which defendant prays leave to incorporate data in this, its Answer, by suitable amendment thereof.

(b) Because, in view of the state of the art in respect to the device disclosed and claimed in said Letters Patent, prior to, or at the time of, the alleged invention of the said Robert Rex Downie, as described and claimed in Letters Patent No. 1,543,250, the supposed improvement described and claimed in said Letters Patent was not a patentable invention, discovery or improvement, but comprised mere selections and adaptations from prior known structures requiring no invention but being within the domain of mere judgment and mechanical skill.

XIX.

Defendant avers that the alleged invention and improvement described and claimed in said Letters Patent 1,543,250, and all substantial and material parts thereof were publicly known to and used by the following persons at the places indicated prior to any invention thereof by the said Robert Rex Downie, and more than two years prior to the filing of an application for said Letters Patent.

A "J. C. French Swinging Scoop Excavator" was publicly used around Toms River, N. J., by a Clay Company located in the vicinity of Newark, N. J.

A "Mahoney Excavating Machine of the Back-Hoe Type," manufactured by The Mahoney Railroad Ditching Machine Co., Vincennes, Indiana, was publicly used by D. H. Mahoney, of North Bend, Ohio, on a farm situated a short distance from the City of Vincennes.

A "Fairbanks Dry Land Excavator," owned by George A. Castle of Crookston, Minn., which was publicly used by said Castle in Polk County, Minn.

And to and by others whose names and residences, and the place of use or knowledge by them defendant begs leave to set up herein by amendment or otherwise when it has more fully ascertained the same.

XX.

Defendant admits that plaintiff is engaged in the manufacture and sale of excavating machines, but defendant is without knowledge as to whether or not said excavating machines embody the alleged inventions covered by the patents in suit or any part thereof, or whether or not the alleged inventions of the patents in suit or each of them are of great utility or value, or whether or not they have come extensively into public use, or whether or not said alleged inventions are of substantial benefit to the public or to the plaintiff, or whether or not the plaintiff has been put to large effort and expense in and about said alleged inventions for the purpose of introducing them into use or supplying embodiments thereof, and therefore denies the same and leaves the plaintiff to its proof. Defendant denies that the business of the plaintiff in this connection is now threatened with irreparable injury or any injury whatsoever by reason of any act or acts of defendant.

XXI.

Defendant has no knowledge, save by bill of complaint, and affidavits filed in this suit, of the allegations contained in paragraph XIV, and therefore denies the same and leaves the plaintiff to its proof.

XXII.

Defendant denies that since the respective dates of issue of said patents Nos. 1,317,431, 1,511,114 and 1,543,250, or since the plaintiff acquired its alleged title and right under said patents, or within six years next preceding the filing of this bill of complaint or at any other time that it has ever without leave or license from plaintiff, or in defiance of said patents or each of them or of any alleged rights of plaintiff thereunder, has made and/or caused to be made, or has used or has sold, or is now making, using or selling within the said Northern District of Ohio, Western Division, or elsewhere within the United States any excavating machines embodying the inventions described and claimed in said patents Nos. 1,317,431, 1,511,114 and 1,543,250 or any of them, or that it has ever infringed either of said patents or any of them, or that it has ever infringed claim 4 of said patent 1,317,431, or that it has ever infringed claims 6, 7, 8, 9, 10, 11, 12, 13 and 14 of said patent No. 1,511,114, or that it has ever infringed claims 1, 2, 3, 4, 5, 6, 9 and 10

of said patent No. 1,543,250, or that it has ever threatened to infringe said patents, or any of the claims thereof, or that it has any intention of so doing, and defendant denies that any affidavits or exhibits filed in this suit or referred to in the bill of complaint will show that defendant infringes said patents in suit.

XXIII.

Defendant denies that it has ever derived, or that it will continue to derive any unlawful gains or profits, or any gains or profits whatsoever from any alleged infringement of the patents in suit, or that the plaintiff has suffered, or is threatened with irreparable damage by reason of any act or acts of defendant, or that defendant has infringed any of said patents in suit or that it is continuing, or that it threatens to continue any act or acts which would constitute infringement, or that defendant has by any act or acts impaired plaintiff's enjoyment of any of its alleged exclusive rights or privileges under said Letters Patent, or any of them, or that it has unjustly or otherwise deprived plaintiff of large profits or any profits whatsoever which plaintiff alleges it would have realized and enjoyed from said alleged inventions except for such alleged infringement.

XXIV.

Defendant denies that the aforesaid patents are susceptible of conjoint embodiment or use in one and the same construction, or that they have been so conjointly embodied or used in machines made or sold by defendant.

XXV.

Defendant has no knowledge, save by the bill of complaint, as to whether or not plaintiff has given notice to the public that its machines are patented by fixing thereon the word "patented" together with the day and year each aforesaid patent was granted, and therefore denies the same and leaves the plaintiff to its proof. Defendant denies that it has ever done, or will, unless restrained, do, or continue to do, any act or acts which could constitute infringement of the patents in suit.

XXVI.

Defendant avers that the application of LeRoy P. Clutter Patent No. 1,317,431, as originally filed, showed and described an inoperative device, and a device lacking in utility.

XXVII.

Defendant avers that claim 4 of the said Clutter Patent No. 1,317,431 is invalid because it is directed to and based upon subject matter that was neither shown nor described in the application at the time of filing of such application.

XXVIII.

Defendant avers that the bill of complaint herein is vague, indefinite, and uncertain, and contains many arguments and many conclusions, and in many instances supports the averments by a statement of evidentiary facts, and in some instances supplements these with the evidence, documents, or affidavits from which they may be found, and by reason of which said bill of complaint violates clause 3 of Equity Rule 25, and should therefore be dismissed.

XXIX.

Defendant avers that the plaintiff having knowledge of defendant's machines for years, knowingly acquiesced in the use thereof by said defendant, and that the plaintiff is, therefore, guilty of laches.

XXX.

Defendant is informed and believes that, while the applications of said Letters Patent Nos. 1,317,431, 1,511,114 and 1,543,250 were pending in the Patent Office of the United States, the applicants for said patents, so limited and confined the claims of said applications under the requirements of the Commissioner of Patents, that said applicants nor their assigns cannot now seek for or obtain a construction for such claims sufficiently broad to cover the construction used by this defendant.

XXXI.

Defendant denies that the plaintiff has any right to a perpetual injunction or to a preliminary injunction upon this suit, and denies that it has in any way trespassed upon any rights of plaintiff whatsoever, and further denies that the plaintiff is entitled to costs, or an account of profits or damages or any damages whatsoever, or to any other or further relief whatsoever.

WHEREFORE, the defendant prays that the bill of complaint herein be dismissed, at the cost of the plaintiff.

LLOYD I. WILLIAMS,
Solicitor for Defendant.

EDWIN P. CORBETT,
Of Counsel.

STIPULATION RE USE OF UNCERTIFIED COPIES OF PATENTS, ETC. AT TRIAL.

(Filed April 9, 1929.)

[Case No. 965]

It is hereby stipulated and agreed by the parties to the above suit as follows:

(1) The Plaintiff is a Pennsylvania corporation, having its principal place of business at Beaver Falls, Pennsylvania and a citizen and inhabitant of said State as pleaded in the Bill of Complaint.

(2) Uncertified printed copies of United States or foreign patents (and where printed copies cannot conveniently be secured, uncertified photostatic or similar copies of United States and foreign patents) may be used with the same force and effect in this case as original or certified copies, subject to correction if error should occur.

(3) Uncertified copies of publications may be accepted in the above entitled case with the same force and effect as certified copies, or the originals, and the dates of the issue and publication of said publications appearing thereon will be accepted as correct, subject to correction if error occur. Each side agrees to furnish the other with copies of publications which it relies upon and to advise the other where the originals may be found.

(4) Exhibits offered in the case may be retained in the possession of the party first producing them subject to inspection by the other party, or the counsel of the other party, upon reasonable notice to the party retaining the exhibits. Such exhibits, however, shall be filed prior to the final hearing in the case or shall be filed at any time therebefore upon the request of opposing counsel.

(5) Each party agrees to furnish copies of all depositions taken by such party in the case to the other party without charge.

RICHEY & WATTS,
Attorneys for Plaintiff.

Cleveland, Ohio,
April .., 1929.

EDWIN P. CORBETT,
Attorney for Defendant.

STIPULATION RE INTERROGATORIES AND DEPOSITIONS.

(Filed April 22, 1929.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for filing interrogatories now due to expire on April 24, 1929, may be and it hereby is extended thirty (30) days or to and including May 24, 1929.

It is further stipulated by and between counsel for the respective parties, the Honorable Court consenting, that the time for taking depositions of both parties under the provisions of Equity Rule 47 shall be extended to commence to run from and after May 24, 1929.

RICHEY & WATTS,

April 22, 1929. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,

April 17, 1929. *Attorney for Defendant.*

MEMORANDUM OPINION OF COURT ON MOTION FOR PRELIMINARY INJUNCTION.

(Filed April 25, 1929.)

[Case No. 965]

HAHN, *J.:*

We have heard extended arguments of counsel urging that a temporary injunction be granted in this proceeding enjoining the defendant from using the patents involved in this litigation pending final hearing. We have read the briefs and the affidavits submitted. Our analysis of the situation would not be of any value to counsel who are thoroughly familiar with the case.

Our conclusion is that, while plaintiff has sustained its patents as against the defenses of an alleged impecunious infringer in a suit which was decided in its favor by Judge Paul Jones, the defendant here is in good faith pressing new defenses which, to say the least, seem to have merit enough to prevent the application of the rule permitting a temporary injunction to plaintiff merely because of the prior adjudication in its favor. Accordingly, we think that, having in mind the decisions of our Circuit Court of Appeals, particularly *Toledo Plate & Window Glass Co. v. Kawneer Mfg. Co.*, 262 Fed. 510, and cases therein cited, the proper course to pursue in this matter is to deny the motion for a temporary injunction, upon condition that the defendant file in this action an appropriate bond payable to the plaintiff, and covering damages which may accrue to the plaintiff from and after the 22nd day of April, 1929. If counsel cannot agree upon the amount of the bond, the court will hear further from counsel. If the defendant refuses to put up a bond, then the plaintiff may have a temporary injunction on giving the usual bond. If counsel cannot agree upon the amount of such bond, the matter may be further submitted to the court.

GEO. P. HAHN,
Judge.

April 25, 1929.

STIPULATION RE INTERROGATORIES AND DEPOSITIONS.

(Filed May 27, 1929.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for filing interrogatories now due to expire on May 24, 1929, may be and it hereby is extended thirty (30) days or to and including June 24, 1929.

It is further stipulated by and between counsel for the respective parties, the Honorable Court consenting, that the time for taking depositions of both parties under the provisions of Equity Rule 47 shall be extended to commence to run from and after June 24, 1929.

PHILIP E. SIGGERS,
May 23, 1929. *Attorney for Plaintiff.*
EDWIN P. CORBETT,
May 20th, 1929. *Attorney for Defendant.*

Time for filing interrogatories and for taking depositions is hereby extended in accordance with the foregoing Stipulation.

GEO. P. HAHN, *Judge.*

ORDER DENYING MOTION FOR PRELIMINARY INJUNCTION.

(Entered June 6, 1929, by Geo. P. Hahn, Judge.)

[Case No. 965]

The plaintiff's motion for preliminary injunction in the above-entitled cause having come on to be heard on the 22nd day of April, 1929, upon affidavits and exhibits filed by the plaintiff and the defendant, and having been argued by counsel for the respective parties, and the Court having fully considered the same, it is hereby,

ORDERED, that the said motion for a preliminary injunction be and the same hereby is denied; upon condition that the defendant give to the plaintiff a bond in the sum of Fifteen Thousand ($15,000.00) Dollars conditioned for the payment of all profits or damages that may be decreed against the defendant in this cause for the infringement of the patents sued on (between the date of this order and the final decree); and it is further Ordered that if the defendant refuses to put up a bond,

then the plaintiff may have a temporary injunction on giving the usual bond.

GEO. P. HAHN,

April 22, 1929. *United States District Judge.*

Approved as to form June 5, 1929.

GEO. E. KIRK, *For Plaintiff.*

BOND.

(Filed June 6, 1929.)

[Case No. 965]

THE UNITED STATES OF AMERICA,
NORTHERN DISTRICT OF OHIO,
WESTERN DIVISION, ss.

Know all men by these presents that The Osgood Company, as principal and the American Surety Company as surety, are held and firmly bound unto Keystone Driller Company in the sum of Fifteen Thousand ($15,000.00) Dollars to the payment of which they bind themselves and each of them, their successors and assigns firmly by these presents. Sealed with our seals and dated this 29th day of May, 1929.

The condition of the above bond is such, that whereas an order of the District Court of the United States for the Northern District of Ohio, Western Division, made and dated on the 22nd day of April, 1929, in a suit in equity therein pending in which suit said Keystone Driller Company is plaintiff and said The Osgood Company is defendant has denied a motion for preliminary injunction upon condition that the said defendant give to the said plaintiff a bond in the sum of Fifteen Thousand ($15,000.00) Dollars for the payment of all profits or damages that may be decreed against the said defendant in said cause by reason of the infringement of the patents sued on, between the date of said Order and the final decree herein, in said cause.

Now, if the said The Osgood Company shall pay to said Keystone Driller Company all profits or damages that are decreed against said The Osgood Company in this cause for the infringement of the patents described in the bill of complaint in said cause, between April 22, 1929, the date of said order, and the final decree in said cause, then these presents and this obligation shall be void; otherwise they shall remain in full force and effect.

THE OSGOOD COMPANY,
By M. C. MCNEIL, *V. P. & Secy.*
(Corporate Seal)
THE AMERICAN SURETY COMPANY,
By FRED J. KINSEY,
Resident Vice President.
(Seal)
Attest: J. M. SCHRADER,
Resident Asst. Secretary at Toledo, Ohio.

Approved:
GEO. P. HAHN, *United States District Judge.*

SUPPLEMENTAL BILL OF COMPLAINT.

(Filed Aug. 21, 1929.)

[Case No. 965]

To the Honorable, the Judges of the District Court of the United States for the Northern District of Ohio, Western Division:

Keystone Driller Company, a corporation of the State of Pennsylvania, having its principal place of business at Beaver Falls, Pennsylvania, presents the following Supplemental Bill of Complaint against The Osgood Company, a corporation organized and existing under the laws of the State of Ohio, and having a regular and established place of business at Marion, Marion County, Ohio, and thereupon Plaintiff complains and alleges:

(I) That on February 9, 1929, Keystone Driller Company, Plaintiff, exhibited its original Bill of Complaint to this Honorable Court against The Osgood Company in which Plaintiff stated that the Defendant was infringing, and threatening infringement, Letters Patent of the United States, Nos. 1,317,431, 1,511,114 and 1,543,250 and seeking relief from such infringement, and threatened infringement.

(II) That said Bill of Complaint recited the invention by LeRoy P. Clutter and Robert Rex Downie of certain new and useful improvements in excavating machines and of the filing of applications thereon for the United States patents, which subsequently issued therefrom, the infringement and threatening infringement thereof by The Osgood Company and other matters as set forth in said Bill of Complaint.

(III) That subsequent to the filing of said Bill of Complaint there was issued to the Plaintiff, Keystone Driller Company, United States Patents Nos. 1,709,466 and 1,716,432, infringement and threatened infringement by The Osgood Company of which is complained of in this Supplemental Bill of Complaint.

(IV) On and prior to January 3, 1927, Robert Rex Downie, a citizen of the United States, then residing at Beaver Falls, Pennsylvania, was the original, first and true inventor of new and useful improvement in Ditcher Scoop Assembly, not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his hereinafter mentioned application for patent therefor in the United States, and not in public use or on sale in the United States for more than two years prior to said application, and not by him abandoned to the public, and not first patented or caused to be patented by him or his legal representatives or assigns, in any foreign country upon an application filed more than twelve months prior to the filing of said application in the United States. So being the original, first and true inventor, as aforesaid, said Robert Rex Downie, on January 3, 1927, made application to the Commissioner of Patents of the United States for a patent for his said invention, in accordance with the then existing laws of the United States, and complied in all respects with the conditions and requirements of said laws.

(V) For good and valuable consideration, by an instrument in writing executed and recorded in the Patent Office before the grant of a patent on his said application of January 3, 1927, the said Robert Rex Downie assigned to plaintiff the whole right, title and interest in and to his said invention and authorized the Commissioner of Patents to issue the patent for said invention to the plaintiff.

(VI) Upon said application of Robert Rex Downie, and pursuant to his said assignment to plaintiff, due proceedings were had, in accordance with all requirements of law, such that on April 16, 1929, United States Patent No. 1,709,466, signed, sealed and executed in due form of law, was issued to plaintiff for said invention or improvements in Ditcher Scoop Assembly. And plaintiff brings here into court a copy of said patent No. 1,709,466 and prays that the same may be taken as part of this Bill of Complaint.

(VII) On and prior to May 22, 1926, Robert Rex Downie, a citizen of the United States, then residing at Beaver Falls, Pennsylvania, was the original, first and true inventor of certain new and useful improvements in Excavating Scoop, not known or used by others in this country before his invention or discovery thereof, not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his hereinafter mentioned application for patent therefor in the United States, and not in public use or on sale in the United States for more than two years prior to said application, and not by him abandoned to the public, and not first patented or caused to be patented by him or his legal representatives or assigns in any foreign country upon an application filed more than twelve months prior to the filing of said application in the United States. So being the original, first and true inventor, as aforesaid, said Robert Rex Downie, on May 22, 1926, made application to the Commissioner of Patents of the United States for a patent on his said invention, in accordance with the then existing laws of the United States, and complied in all respects with said laws.

(VIII) For good and valuable consideration by an instrument in writing executed and recorded in the Patent Office before the grant of a patent on his said application of May 22, 1926, the said Robert Rex Downie

assigned to plaintiff the whole right, title and interest in and to his said invention set forth in the application last mentioned, and authorized the Commissioner of Patents to issue the patent therefor to the plaintiff.

(IX) Upon said Robert Rex Downie's said application of May 22, 1926, and pursuant to his assignment to plaintiff of the invention described therein, due proceedings were had, in accordance with all requirements of law, such that on June 11, 1929, United States Patent No. 1,716,432, signed, sealed and executed in due form of law, was issued to plaintiff for said invention or improvements in Excavating Scoop. And plaintiff brings here into court a copy of said patent No. 1,716,432 and prays that the same may be taken as part of this bill of complaint.

(X) By reason of the premises, prior to the filing of this bill of complaint, and prior to the acts of infringement hereinafter complained of, plaintiff became and has ever since remained and now is the sole owner of said patents Nos. 1,709,466 and 1,716,432 and of all rights thereunder.

(XI) Under the protection of the aforesaid patents, plaintiff is engaged in the manufacture and sale of Excavating Machines embodying said inventions. Said inventions of said patents and each of them are of great utility and value, and have come extensively into public use, with substantial benefits to the public and to the plaintiff. The plaintiff has been to large effort and expense in and about said inventions for the purpose of introducing them into use and supplying embodiments thereof. Its business in this connection is now threatened with irreparable injury by the acts of defendant hereinafter complained of.

(XII) Since the respective dates of issue of said patents Nos. 1,709,466 and 1,716,432 and since the plaintiff acquired its title to and rights under said patents as hereinbefore recited, and within six years next preceding the filing of this bill of complaint, and without leave of or license from plaintiff, and in defiance of said patents and each of them and of plaintiff's rights thereunder, the said The Osgood Company has made and/or caused to be made and has used and has sold, and is now making, using and selling, within said Northern District of Ohio, Western Division, and elsewhere within the United States of America, numerous excavating machines em-

bodying the inventions described and claimed in and patented by said patents Nos. 1,709,466 and 1,716,432 and each of them, in infringement of said patents and each of them, and defendant threatens to continue to infringe each of said patents.

(XIII) Defendant has derived and continues to derive unlawful gains and profits from said infringement, and plaintiff has suffered and is threatened with irreparable damage by reason of said infringement. Defendant threatens to continue all of said acts above complained of. Defendant by its acts aforesaid has impaired plaintiff's enjoyment of its exclusive rights and privileges granted upon issue of said letters patent, and each of them, and has unjustly deprived plaintiff of large profits which it would have realized and enjoyed from said inventions except for defendant's infringement.

(XIV) The inventions of the aforesaid patents are susceptible of conjoint embodiment and use in one and the same construction, both with each other and with the invention of the patents set forth in the original bill of complaint, and have been so conjointly embodied and used in the machines made and sold by defendant as aforesaid.

(XV) Plaintiff has also specially notified defendant of each of said patents and of plaintiff's ownership thereof and of the infringements complained of, but said defendant has continued and will unless restrained continue its acts complained of notwithstanding and in spite of said notice.

WHEREFORE plaintiff prays:

(a) That the defendant, The Osgood Company, be directed to appear and answer this Bill of Complaint (but not under oath, answer under oath being expressly waived), and to abide by and perform such orders and decrees as the court may deem proper.

(b) That the defendant, The Osgood Company, and its officers, agents, servants, employees, and all persons in privity with them and each of them, be enjoined and restrained *pendente lite*, by decree and injunction of this court, from directly or contributorily infringing plaintiff's said patents Nos. 1,709,466 and 1,716,432, and each of them and from threatening to infringe the same.

(c) That the defendant, The Osgood Company, and its officers, agents, servants, employees, and all persons in privity with them, and each of them, be enjoined and restrained perpetually, by decree and injunction of this court, from directly or contributorily infringing plaintiff's said patents Nos. 1,709,466 and 1,716,432 and each of them and from threatening to infringe the same.

(d) That the defendant, The Osgood Company, be required to account to plaintiff for the profits realized by defendant and the damages to plaintiff in the premises; and that this cause be referred to a Master to take an accounting of said profits and damages; and that such damages be increased to three times the amount thereof or as to the Court may seem meet in view of all the circumstances.

(e) That said defendant be decreed to pay the costs and disbursements of this suit to be taxed.

(f) And that plaintiff have such other and further relief as to the court may seem meet.

KEYSTONE DRILLER COMPANY,
ROBERT REX DOWNIE,
Secretary.

GEO. E. KIRK, *Solicitor,*
RICHEY & WATTS, *Solicitors,*
P. C. SIGGERS, *Of Counsel.*

Verification.

STATE OF PENNSYLVANIA,
COUNTY OF BEAVER, ss.

Robert Rex Downie, being duly sworn, deposes and says that he is Secretary of the corporation, Keystone Driller Company, the plaintiff named in the foregoing Bill of Complaint; that he has read this Bill; that insofar as the statements contained in this Bill are within his knowledge they are true, and so far as they are derived from information and belief, he verily believes them to be true.

ROBERT REX DOWNIE.

Subscribed and sworn to before me this 5th day of August, 1929.

CHAS. THEO. SMITH,
(Notarial Seal) *Notary Public.*
Commission expires March 13, 1931.

Service of copy of Supplemental Bill of Complaint acknowledged for purpose of Petition for Leave to File, Noticed for Saturday, August 24, 1929, at 10:00 A. M.

ALFRED C. HIRTH,
Of Counsel for Defendant.

Aug. 21, 1929.

PRINTER'S NOTE:

Copies of U. S. Patents Nos. 1,709,466 and 1,716,432 to Robert Rex Downie were attached to the original of this Supplemental Bill of Complaint, but same have been omitted at this point as they are listed as a part of Defendant's Exhibit No. 62, Book of Patents.

ORDER PERMITTING FILING OF SUPPLEMENTAL BILL OF COMPLAINT.

(Entered August 23, 1929, by S. H. West, Judge.)

[Case No. 965]

It is hereby ordered that the Plaintiff be permitted to file its Supplemental Bill of Complaint with respect to United States Letters Patents to Downie, Nos. 1,709,466 and 1,716,432.

S. H. WEST,
United States District Judge.

Signed by Judge West at Cleveland, 8/22/29. FOR.

Plaintiff assents to the entry of the above Order.

RICHEY & WATTS,
Counsel for Plaintiff.

Defendant assents to the filing of the Supplemental Bill of Complaint, reserving its right to except as to its form or substance.

EDWIN P. CORBETT,
Counsel for Defendant.

MOTION FOR EXTENSION OF DEFENDANT'S TIME FOR FILING ANSWER TO SUPPLEMENTAL BILL OF COMPLAINT AND ORDER GRANTING EXTENSION.

(Filed Sept. 7, 1929.)

[Case No. 965]

Now comes the defendant, by its attorneys and moves the Court for an order extending its time for filing answer to plaintiff's Supplemental Bill of Complaint herein, from September 11, 1929, to and including October 1, 1929, and respectfully shows:

1. That an order was signed by the Court on August 22, 1929, permitting plaintiff to file a Supplemental Bill of Complaint herein alleging infringement of United States Letter Patent No. 1,709,466, dated April 16, 1929, United States Letter Patent No. 1,716,432, dated June 11, 1929.

2. That plaintiff's attorneys have notified defendant's attorneys, Sept. 3, 1929, that plaintiff will rely at the trial on some twenty-four (24) claims of these additional patents added to this suit by the Supplemental Bill of Complaint.

3. That defendant's attorneys will be unable to file its answer to said Supplemental Bill of Complaint within the time now set, due to the fact that it has not had sufficient time to complete its searches in the patented art to which these patents relate, although defendant's attorneys started these searches before the Supplemental Bill of Complaint was actually filed herein.

4. That defendant's attorneys have to date received no report from said searches so instituted, and that if a report were received within the remaining time left for filing its answer to said Supplemental Bill of Complaint, such time remaining would not be sufficient to enable defendant's attorneys to study and select the references in time to permit defendant's attorneys to file his answer to said Supplemental Bill of Complaint within his time.

Wherefore, defendant prays that its time for filing answer to said Supplemental Bill of Complaint be extended to and including October 1, 1929.

Respectfully submitted,

EDWIN P. CORBETT,
Attorney for Defendant.

ORDER: It is so ordered.

GEO. P. HAHN,
U. S. District Judge.

Dated on September 9th, 1929.

ORDER PERMITTING THE GENERAL EXCAVATOR COMPANY AND THE OSGOOD COMPANY TO TAKE DEPOSITIONS JOINTLY.

(Entered Sept. 9, 1929, by Geo. P. Hahn, Judge.)

[Case No. 965]

It is hereby ordered:

1. That the General Excavator Company, and The Osgood Company, defendants in Equity Cases 964 and 965, respectively, now pending in this Court, may take jointly any and all depositions allowed by statute or the United States Equity Rules, such depositions so taken to be entitled in both of said cases, and a separate copy of any and all depositions so taken, with exhibits, to be filed in each case, provided that when the original ink copy of any said depositions and original Exhibits are filed in one case a carbon copy of said depositions and copies of said original Exhibit may be filed in the other case subject to comparison with the original deposition and original exhibits and subject to correction if any error or discrepancy be found.

2. That any and all depositions so taken may be read on the trial of either or both of said cases the same as if the said depositions had been taken by the defendants separately, subject to all exceptions for relevancy.

3. That the said defendants shall serve separate notices of taking testimony upon the Keystone Driller Company or its attorneys and that a separate certificate shall be filed with each deposition in each case by the officer before whom such deposition is taken.

4. That at the taking of said depositions the witnesses may be examined by the attorney for either defendant on behalf of the other defendant, or the attorney for each defendant may examine the witnesses separately as they so desire.

5. That a copy of this order be filed in each of said cases.

GEO. P. HAHN, *District Judge.*

STIPULATION RE DEPOSITIONS.

(Filed Sept. 28, 1929.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including October 26, 1929, and both parties' times for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,

September 26, 1929. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,

September 25, 1929. *Attorney for Defendant.*

OK: GEO. P. HAHN.

ANSWER TO SUPPLEMENTAL BILL OF COMPLAINT.

(Filed Oct. 1, 1929.)

[Case No. 965]

Answer of The Osgood Company to the Supplemental Bill of Complaint of the Keystone Driller Company in the above-entitled cause:

I.

Defendant admits that, on February 9, 1929, Keystone Driller Company, Plaintiff, filed its original Bill of Complaint against The Osgood Company, but Defendant denies that it ever infringed or threatened to infringe Letters Patent of the United States, Nos. 1,317,431, 1,511,114 and 1,543,250, or that the Plaintiff is entitled to any relief for any such alleged infringement, or any such alleged threatened infringement.

II.

Defendant admits that Plaintiff's original Bill of Complaint recited alleged inventions by LeRoy P. Clutter and Robert Rex Downie of certain alleged new and useful improvements in Excavating Machines and of the filing of applications thereof for United States Letters Patents, but Defendant denies that The Osgood Company ever infringed or threatened to infringe any of the said patents recited in said original Bill of Complaint, as will more fully appear from Defendant's Answer to said original Bill of Complaint.

III.

Defendant admits that, subsequent to the filing of said original Bill of Complaint, there was issued to the Plaintiff, Keystone Driller Company, United States Letters Patents Nos. 1,709,466 and 1,716,432, but Defendant denies that it has ever infringed, or threatened to infringe, said Letters Patents upon which is based this Supplemental Bill of Complaint.

IV.

Defendant admits that, on January 3, 1927, Robert Rex Downie filed in the United States Patent Office an application for Letters Patent, upon Ditcher-Scoop Assembly, but Defendant denies all of the other allegations of Paragraph IV of said Supplemental Bill of Complaint.

V.

Defendant has no knowledge, save by the Supplemental Bill of Complaint, of the allegations contained in Paragraph V, and, therefore, denies the same, and leaves the Plaintiff to its proof.

VI.

Defendant admits that on April 16, 1929, United States Letters Patent, No. 1,709,466, was issued to Plaintiff as alleged Assignee of Robert Rex Downie, upon said application for Ditcher-Scoop Assembly, but Defendant denies all of the other allegations of Paragraph VI of the Supplemental Bill of Complaint.

VII.

Defendant denies that the alleged invention and alleged improvement described and claimed in said Letters Patent, No. 1,709,466, contains and embodies any ma-

terial beneficial advances over what has previously been known to those skilled in the art, but, on the contrary, avers the fact to be that the claims of said Letters Patent and each of them are invalid and void on the following grounds:

(a) Because the said Robert Rex Downie was not the original and first inventor or discoverer of the invention alleged to be described and claimed in the said Letters Patent, or of any material or substantial part thereof, but that the same, and all material or substantial parts thereof, had been patented or described in patents filed prior to the date of the alleged invention of the said Robert Rex Downie; and that said patent is void and invalid because the alleged invention has been patented or described in printed publications prior to said Downie's supposed invention or discovery thereof, or more than two years prior to his application therefor, as follows:

UNITED STATES PATENTS

Patentee	*Number*	*Issued*
R. R. Osgood,	254,563,	March 7, 1882
G. W. King,	589,565,	Sept. 7, 1897
A. W. Robinson,	650,991,	June 5, 1900
O. Hetlesaeter,	665,682,	June 8, 1901
P. Howard,	647,417,	May 21, 1901
R. R. Osgood,	708,658,	Sept. 9, 1902
W. Ferris,	809,436,	Jan. 9, 1906
J. H. W. Libbe,	822,529,	June 5, 1906
A. L. Becker,	857,577,	June 25, 1907
O. Hetlesaeter,	875,432,	Dec. 31, 1907
J. G. Fairbanks,	892,508,	July 7, 1908
A. W. Robinson,	1,047,991,	Dec. 24, 1912
E. S. Black,	1,107,252,	Aug. 18, 1914
T. F. Moore,	1,378,970,	May 24, 1921
W. D. Williams,	1,479,849,	Jan. 8, 1924
R. R. Downie,	1,511,114,	Oct. 7, 1924
R. R. Downie,	1,518,314,	Dec. 9, 1924
W. M. Bager, et al.,	1,599,630,	Sept. 14, 1926
E. H. Lichtenberg,	1,609,372,	Dec. 7, 1926
A. F. Jelen,	1,611,195,	Dec. 21, 1926

Also, in many other Letters Patent and printed publications not known to the Defendant but, which when discovered hereafter, Defendant prays leave of the Court to furnish and concerning which Defendant prays leave

to incorporate data in this, its Answer, to supplemental Bill of Complaint, by suitable amendment thereof.

(b) Because, in view of the state of the art in respect to the device disclosed and claimed in said Letters Patent, prior to, or at the time of, the alleged invention of the said Robert Rex Downie, as described and claimed in Letters Patent, No. 1,709,466, the supposed improvement described and claimed in said Letters Patent was not a patentable invention, discovery or improvement, but comprised mere selections and adaptations from prior known structures requiring no invention, but being within the domain of mere judgment and mechanical skill.

VIII.

Defendant avers that the alleged invention and improvement described and claimed in said Letters Patent, No. 1,709,466, and all material and substantial parts thereof were publicly known to and used by the following persons at the places indicated prior to any invention thereof by the said Robert Rex Downie, and more than two years prior to the filing of an application for said Letters Patent:

The Osgood Company, of Marion, Ohio, at Marion, Ohio, and elsewhere in the United States;

The Mahoney Railroad Ditching Machine Co., of Vincennes, Indiana, at Vincennes, Indiana, and elsewhere in the United States.

And to and by others whose names and residences, and the place of use or knowledge by them Defendant begs leave to set up herein by amendment or otherwise when it has more fully ascertained the same.

IX.

Defendant admits that, on May 22, 1926, Robert Rex Downie made application for United States Letters Patent on alleged Improvement in Excavating Scoop, but Defendant denies all of the other allegations of Paragraph VII of the Supplemental Bill of Complaint.

X.

Defendant has no knowledge, save by the Supplemental Bill of Complaint, of the allegations contained in Paragraph VIII, and, therefore, denies the same, and leaves the Plaintiff to its proof.

XI.

Defendant admits that, on June 11, 1929, United States Letters Patent, No. 1,716,432, was issued to the Keystone Driller Company upon said Downie application for alleged improvements in Excavating Scoop, as alleged Assignee of said Robert Rex Downie, but Defendant denies all of the other allegations of Paragraph IX of the said Supplemental Bill of Complaint.

XII.

Defendant denies that the alleged invention and improvement described and claimed in said Letters Patent, No. 1,716,432, contains and embodies any material beneficial advance over what has previously been known to those skilled in the art, but, on the contrary, avers the fact to be that the claims of said Letters Patent and each of them are invalid and void on the following grounds:

(a) Because the said Robert Rex Downie was not the original and first inventor or discoverer of the invention alleged to be described and claimed in the said Letters Patent, or of any material or substantial part thereof, but that the same, and all material or substantial parts thereof, had been patented or described in patents filed prior to the date of the alleged invention of the said Robert Rex Downie; and that said patent is invalid and void because the alleged invention has been patented or described in printed publications prior to the said Downie's supposed invention or discovery thereof, or more than two years prior to his application for a patent therefor, as follows:

UNITED STATES PATENTS

Patentee	*No.*	*Issued*
W. Davey,	Re. 11,516,	Dec. 3, 1895
H. G. Butler,	493,421,	March 14, 1893
E. J. Davy,	508,685,	Nov. 14, 1893
W. Davy,	514,645,	Feb. 13, 1894
H. G. Butler,	519,835,	May 15, 1894
V. W. Mason, Jr.,	711,992,	Oct. 28, 1902
F. M. Bisbee,	741,099,	Oct. 13, 1903
W. S. Livengood,	872,439,	Dec. 3, 1907
W. H. Gade,	1,014,293,	Jan. 9, 1912
J. E. Potter,	1,147,432,	July 20, 1915
A. Hemme,	1,233,574,	July 17, 1917

T. F. Moore,	1,245,118,	Oct.	30, 1917
W. L. Edmondson,	1,340,385,	May	18, 1920
H. C. McGrew,	1,446,389,	Feb.	20, 1923
R. R. Downie,	1,511,114,	Oct.	7, 1924
R. R. Downie,	1,518,314,	Dec.	9, 1924
H. J. Bentson,	1,560,136,	Nov.	3, 1925
C. Harrison,	1,580,725,	Apr.	13, 1926
G. T. Rosselle,	1,648,783,	Nov.	8, 1927

and, also, in many other Letters Patent and printed publications not known to the Defendant but, which when discovered hereafter, Defendant prays leave of the Court to furnish and concerning which Defendant prays leave to incorporate data in this, its Answer, to the Supplemental Bill of Complaint, by suitable amendment thereof.

(b) Because, in view of the state of the art in respect to the device disclosed and claimed in said Letters Patent, prior to, and at the time of, the alleged invention of the said Robert Rex Downie, as described and claimed in Letters Patent No. 1,716,432, the supposed improvement described and claimed in said Letters Patent was not a patentable invention, discovery or improvement, but comprised mere selections and adaptations from prior known structures requiring no invention but being within the domain of mere judgment and mechanical skill.

XIII.

Defendant avers that the alleged invention and improvement described and claimed in said Letters Patent, No. 1,716,432, and all material and substantial parts thereof were publicly known and used by the following persons at the places indicated prior to any invention thereof by the said Robert Rex Downie, and more than two years prior to the filing of an application for said Letters Patent:

And to and by others whose names and residences and the place of use or knowledge by them Defendant begs leave to set up herein by amendment or otherwise when it has more fully ascertained the same.

XIV.

Defendant has no knowledge save by the Supplemental Bill of Complaint of the allegations contained in Paragraph X, and, therefore, denies the same and leaves the Plaintiff to its proof.

XV.

Defendant admits that the Plaintiff is engaged in the manufacture and sale of Excavating Machines, but Defendant is without knowledge as to whether or not said Excavating Machines embody the alleged inventions covered by the aforesaid patents in suit or any part thereof, or whether or not the alleged inventions of the patents in the Supplemental Bill of Complaint or each of them are of great utility or value, or whether or not they have come extensively into public use, or whether or not said alleged inventions are of substantial benefit to the public or to the Plaintiff, or whether or not the Plaintiff has been put to large effort and expense in and about said alleged inventions for the purpose of introducing them into use or supplying embodiments thereof and, therefore, denies the same and leaves the Plaintiff to its proof. Defendant denies that the business of the Plaintiff in this connection is now threatened with irreparable injury or any injury whatsoever by reason of any act or acts of Defendant.

XVI.

Defendant denies that, since the respective dates of issue of said patents Nos. 1,709,466 and 1,716,432, or since the Plaintiff acquired its alleged title and right under said patents, or within six years next preceding the filing of this Supplemental Bill of Complaint or at any other time, it has ever without leave or license from the Plaintiff, or in defiance of said patents or each of them, or of any alleged rights of Plaintiff thereunder, has made and/or caused to be made, or has used or has sold, or is now making, using or selling within the said Northern District of Ohio, Western Division, or elsewhere within the United States, any excavating machines embodying the alleged inventions described and claimed in said Letters Patent, Nos. 1,709,466 or 1,716,432, or any of them, or that it has ever infringed either of said patents or any of them, or that it has ever threatened to infringe either of said patents or any of the claims thereof, or that it has any intention of so doing, or that Defendant threatens to infringe any of said patents in the future.

XVII.

Defendant denies that it has ever derived, or that it will continue to derive any unlawful gains or profits, or any gains or profits whatsoever from any alleged infringements of the patents sued on in the Supplemental

Bill of Complaint, or that the Plaintiff has suffered or is threatened with irreparable damage by reason of any act or acts of Defendant, or that Defendant has infringed any of said patents mentioned in the Supplemental Bill of Complaint, or that it is continuing or that it threatens to continue any act or acts which would constitute infringement, or that Defendant has by any act or acts impaired Plaintiff's enjoyment of any of its alleged exclusive rights or privileges under said Letters Patent, or any of them, or that it has unjustly or otherwise deprived Plaintiff of large profits or any profits whatsoever which Plaintiff alleges it would have realized and enjoyed from said alleged inventions, except for such alleged infringement.

XVIII.

Defendant denies that the aforesaid patents are susceptible of conjoint embodiment or use in one and the same construction, or that they have been so conjointly embodied or used in machines made or sold by Defendant.

XIX.

Defendant admits having received notice from Plaintiff alleging infringement of United States Letters Patent, No. 1,709,466, but Defendant avers such notice was not received on this patent until several days after June 4, 1929, and Defendant is unable to locate any alleged legal notice having been received by it and, therefore, denies notice of alleged infringement of patent No. 1,716,432, prior to the filing of this Supplemental Bill of Complaint, and Defendant denies that it has continued or will, unless restrained, continue to do, any act or acts which would constitute infringement of the said patents upon which this Supplemental Bill of Complaint is based.

XX.

Defendant is informed and believes that, while applications for said Letters Patent Nos. 1,709,466, and 1,716,432, were pending in the Patent Office of the United States, the applicants of the said patents so limited and confined the claims of said applications under the requirements of the Commissioner of Patents, that neither said applicants nor their assigns can now seek for or obtain a construction for such claims sufficiently broad to cover the construction used by this Defendant.

XXI.

Defendant denies that the Plaintiff has any right to a perpetual injunction or to a preliminary injunction upon this suit, and denies that it has in any way trespassed upon any rights of Plaintiff whatsoever, or that it has directly or contributorily infringed Plaintiff's patents Nos. 1,709,466 and 1,716,432, or that it has ever threatened to infringe either of said patents, or that the Plaintiff is entitled to costs or an account of profits or damages or any damages whatsoever, or to any other or further relief whatsoever.

WHEREFORE, the Defendant prays that the Supplemental Bill of Complaint herein be dismissed, at the cost of the Plaintiff.

LLOYD I. WILLIAMS,
Solicitor for Defendant.

EDWIN P. CORBETT,
Of Counsel.

PLAINTIFF'S INTERROGATORIES.

(Filed Oct. 21, 1929.)

[Case No. 965]

Now comes the plaintiff, the Keystone Driller Company, by its attorneys, and within twenty-one (21) days after the filing of defendant's answer to the supplemental bill of complaint, and applies to the Court for an order allowing plaintiff to file interrogatories and directing Mr. M. C. McNeil, vice president and secretary, or other officers or employee of defendant company having knowledge of the matters inquired about, to answer the following interrogatories under oath:

(1) Did defendant make, use and/or sell the particular machine pictured in photographs, plaintiff's ex-

hibits 1 to 13 inclusive, attached hereto between June 11, 1929, the date of issue of Letters Patent No. 1,716,432 here in suit and August 23, 1929, the date of filing of the supplemental bill of complaint. For defendant's information in answering this and subsequent interrogatories plaintiff states that the machine shown in the photographs just mentioned bore the following markings: No. 2199, The Osgood Company, Marion, Ohio, Joseph L. Cuozzo, General Contractor, 27 Tuckahoe Rd., Tel.—Yonkers 1214, when the photographs were made at Yonkers, New York, in July 1929.

(2) If the answer to interrogatory No. 1 is in the negative then did defendant make, use and/or sell, between June 11, 1929 and August 23, 1929 any excavating scoops having teeth secured to the sides thereof like the scoop shown by Nos. 1-2-5-6-11-12 and/or -13 of the attached photographs, plaintiff's exhibits 1 to 13 inclusive.

(3) If the answers to interrogatories 1 and/or 2 are in the negative will defendant furnish plaintiff at the time of filing answers to these interrogatories with drawings of all the excavating scoops having teeth secured to the sides thereof which defendant has made, used and/or sold between June 11, 1929 and August 23, 1929.

(4) Did defendant make, use and/or sell the particular machine pictured in the photographs, plaintiff's exhibits 1 to 13 inclusive, attached hereto, between April 16, 1929, the date of issue of Letters Patent No. 1,709,466, here in suit, and August 23, 1929, the date of filing of the supplemental bill of complaint.

(5) If the answer in interrogatory No. 4 is in the negative then did defendant make, use and/or sell between April 16, 1929 and August 23, 1929, any ditcher stick and/or excavating scoop like those shown by Nos. 1-2-5-6-7-8-9 and/or 10 of the attached photographs, plaintiff's exhibits 1 to 13 inclusive.

(6) If the answers to interrogatories 4 and/or 5 are in the negative, will defendant furnish plaintiff, at the time answers to these interrogatories are filed, with drawings of all the ditcher sticks and excavating scoops adapted to be removably assembled together which defendant has made, used and/or sold between April 16, 1929 and August 23, 1929.

The foregoing interrogatories are intended to elicit facts material to plaintiff's case and are in accordance

with the provisions of Equity Rule No. 58 and the established practice in the Courts of this District and Circuit.

RICHEY & WATTS,
Attorneys for Plaintiff.

It is hereby ordered that the foregoing interrogatories be filed and that Mr. M. C. McNeil or other officer or employee of the defendant company having knowledge of the facts inquired about make answer to the interrogatories under oath.

GEO. P. HAHN,
U. S. District Judge.

STIPULATION RE DEPOSITIONS.

(Filed Oct. 22, 1929.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for filing interrogatories under the Supplemental Bill of Complaint and answer thereto herein now due to expire on October 21, 1929, may be and it hereby is extended thirty (30) days or to and including November 21, 1929.

It is further stipulated by and between counsel for the respective parties, the Honorable Court consenting, that the time for taking depositions of both parties under said Supplemental Bill of Complaint in accordance with the provisions of Equity Rule 47 shall be extended to commence to run from and after November 21, 1929.

RICHEY & WATTS,
October 18, 1929. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,
October 18, 1929. *Attorney for Defendant.*

Approved: GEO. P. HAHN, *D. J.*

STIPULATION RE DEPOSITIONS.

(Filed Oct. 26, 1929.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including November 26, 1929, and both parties' times for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,
October 23, 1929. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,
October 22, 1929. *Attorney for Defendant.*

Approved: GEO. P. HAHN, *U. S. District Judge.*

OBJECTIONS TO PLAINTIFF'S INTERROGATORIES.

(Filed Oct. 31, 1929.)

[Case No. 965]

Now comes defendant by its attorney and objects to the interrogatories filed by plaintiff October 21, 1929 under its supplemental bill of complaint, on the following grounds:

1. Each and all of plaintiff's said interrogatories are objected to because of the fact that plaintiff's Supplemental Bill of Complaint prays for "trebled damages." Increased damages are in the nature of a penalty and it is settled law that a Court of Equity will not compel discovery by a party if such discovery may subject such party to a penalty.

The defendant, therefore, respectfully requests the Court that an order be entered to the effect that the defendant need not answer any of the interrogatories propounded by plaintiff herein unless and until all claims for any such increased damages be abandoned by plaintiff and withdrawn from its Supplemental Bill of Complaint.

2. Interrogatories 1 and 4 are objected to on the ground that whereas they require defendant to state

whether or not it made, used or sold a particular machine which is alleged to be shown in photographs 1 to 13 inclusive, none of the said photographic exhibits referred to shows an entire machine but merely indistinct and fragmentary parts of machines of such an incomplete nature that defendant could not safely, correctly or conscientiously answer said interrogatories based on such incomplete, indistinct and fragmentary reference matters as Exhibits 1-13 appear to be.

3. Interrogatories 2 and 5 are objected to on the ground that they require answers by defendant which necessarily would have to be conclusions and surmises based upon inspection of small photographic exhibits referred to in said interrogatories which said exhibits are of such an incomplete, fragmentary and indistinct a nature that defendant could not correctly nor safely make answer; or determine from said photographs whether the parts referred to in said interrogatories were in fact like any made, used or sold by defendant or not.

4. Interrogatories 3 and 6 are objected to on the ground that whereas the patents sued upon in said supplemental bill of complaint are confined to specific structures, the said interrogatories call for production by defendant of drawings of all excavating scoops having teeth secured to the sides thereof, and drawings of all ditcher sticks and excavating scoops adapted to be removably assembled together made, used or sold by defendant, whether coming within the claim of said patents sued or not.

5. Interrogatories 3 and 6 are objected to on the ground that they are too broad and are in the nature of a mere "fishing expedition," and therefore not in support of the case or relief which plaintiff claims itself entitled to in its supplemental bill of complaint.

Respectfully submitted,

EDWIN P. CORBETT,
Attorney for Defendant.

LLOYD I. WILLIAMS,
Solicitor for Defendant.

Service of a copy of the foregoing Objections to Plaintiff's Interrogatories is hereby acknowledged this 31st day of ....., 1929.

GEO. E. KIRK,
Solicitor for Plaintiff.

STIPULATION RE DEPOSITIONS.

(Filed Nov. 30, 1929.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including December 26, 1929, and both parties' times for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,

November 26, 1929. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,

November 26, 1929. *Attorney for Defendant.*

Approved: GEO. P. HAHN, *Judge.*

STIPULATION RE DEPOSITIONS.

(Filed Dec. 24, 1929.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including January 26, 1930, and both parties' time for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,

December 18, 1929. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,

December 18, 1929. *Attorney for Defendant.*

If is so ordered.

GEO. P. HAHN, *Judge.*

STIPULATION RE DEPOSITIONS.

(Filed Feb. 4, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including February 26, 1930, and both parties' time for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,

January 31, 1930. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,

January 26, 1930. *Attorney for Defendant.*

It is so ordered.

JOHN M. KILLITS, *Judge.*

MOTION FOR EXTENSION OF TIME FOR TAKING DEPOSITIONS AND ORDER GRANTING MOTION.

(Filed Feb. 21, 1930.)

[Case No. 965]

Now comes the Defendant, by its Attorney, and moves that its time for taking original depositions under the provisions of Equity Rule 47, in the above-entitled case, now due to expire on February 26, 1930, be extended for a period of thirty (30) days, or to and including March 26, 1930.

EDWIN P. CORBETT,

February 20, 1930. *Attorney for Defendant.*

It is so ordered.

GEO. P. HAHN, *Judge.*

STIPULATION RE DEPOSITIONS.

(Filed Feb. 27, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking Depositions under the Supplemental Bill of Complaint in the above-entitled case in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including March 21, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,

Feb. . ., 1930. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,

Feb. 20, 1930. *Attorney for Defendant.*

It is so ordered.

GEO. P. HAHN,

February 27, 1930. *Judge.*

MOTION TO EXTEND TIME TO TAKE DEPOSITIONS AND ORDER GRANTING EXTENSION AND AFFIDAVIT OF EDWIN P. CORBETT, IN SUPPORT.

(Filed March 17, 1930.)

[Case No. 965]

Now comes the Defendant, by its Attorney, and moves that its time for taking original depositions under the provisions of Equity Rule 47, in the above-entitled case, now due to expire on March 26, 1930, be extended for a period of thirty (30) days, or to and including April 26, 1930.

EDWIN P. CORBETT,

March 17, 1930. *Attorney for Defendant.*

Extension granted to April 26, 1930.

GEO. P. HAHN,

March 17, 1930. *Judge.*

AFFIDAVIT OF EDWIN P. CORBETT.

(Filed March 17, 1930.)

[Case No. 965]

STATE OF OHIO,
COUNTY OF FRANKLIN, SS.

EDWIN P. CORBETT, being first duly sworn, deposes and says that he is Attorney for Defendant in the above-entitled case; that Defendant's time for taking depositions under the provisions of Equity Rule 47 is due to expire March 26, 1930; that Defendant has been very diligent, having taken to date some twenty-three depositions of witnesses living in various parts of the United States; that it has already sent out a Notice for taking the depositions of some five witnesses beginning March 19, 1930, at Joplin, Missouri; that a notice for taking testimony has likewise been mailed for the taking of a deposition at Leadville, Colorado, on March 24, 1930; that the time now left will be insufficient for taking the depositions of the witnesses whose testimony Defendant will require to support the defenses set out in its answer to the original Bill of Complaint, and may even be insufficient for the taking of the testimony of the witnesses for whom the notices have now been mailed at Joplin, Missouri, and Leadville, Colorado; that the extension requested is for Defendant's time for taking depositions under the original Bill of Complaint and not for its time for taking depositions under the Supplemental Bill of Complaint; that Plaintiff has refused to grant any further extension to Defendant for taking depositions under the original Bill of Complaint, therefore, making it necessary for Defendant to apply to the Court for this extension; that Defendant will need this additional time to complete its defenses to the allegation of the original Bill of Complaint.

EDWIN P. CORBETT.

Sworn to and subscribed before me, a Notary Public in and for the County aforesaid, this 15th day of March, 1930.

JESSIE L. JORDAN,

(Notarial Seal) *Notary Public in and for Franklin County.*

My commission expires Feb. 14, 1933.

STIPULATION RE DEPOSITIONS.

(Filed April 4, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking Depositions under the Supplemental Bill of Complaint in the above entitled case in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including April 21, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,
Attorneys for Plaintiff.

March ...., 1930.

EDWIN P. CORBETT,
Attorney for Defendant.

March 15, 1930

It is so ordered.

GEO. P. HAHN, *Judge.*

STIPULATION RE DEPOSITIONS.

(Filed April 29, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that defendant's time for taking original depositions under the provisions of Equity Rule 47 shall be, and hereby is, extended to and including May 11, 1930, and both parties' time for taking rebutting depositions is extended accordingly.

RICHEY & WATTS,
Attorneys for Plaintiff.

April 22, 1930.

EDWIN P. CORBETT,
Attorney for Defendant.

April 21, 1930.

It is so ordered.

GEO. P. HAHN, *Judge.*

STIPULATION RE DEPOSITIONS.

(Filed April 29, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking Depositions under the Supplemental Bill of Complaint in the above-entitled case in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including May 6, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,

April 22, 1930. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,

April 21, 1930. *Attorney for Defendant.*

It is so ordered.

GEO. P. HAHN, *Judge.*

STIPULATION RE DEPOSITIONS.

(Filed May 9, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking Depositions under the Original and the Supplemental Bills of Complaint in the above-entitled case in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including May 26, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,

May 7, 1930. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,

May 9, 1930. *Attorney for Defendant.*

It is so ordered.

GEO. P. HAHN, *Judge.*

STIPULATION RE DEPOSITIONS.

(Filed May 29, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking Depositions under the Original and Supplemental Bills of Complaint in the above-entitled case, in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including June 26, 1930; and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,
Attorneys for Plaintiff.

May 24, 1930.

EDWIN P. CORBETT,
Attorney for Defendant.

May 24, 1930.

It is so ordered.

GEO. P. HAHN, *Judge.*

ORDER PERMITTING SUBSTITUTION OF BOND.

(Entered May 29, 1930 by Geo. P. Hahn, Judge.)

[Case No. 965]

This cause came on to be heard at this term, upon Defendant's application to withdraw its Bond filed herein on June 6, 1929, for Fifteen Thousand Dollars ($15,000.00) and to substitute in place thereof a new Bond dated May 22, 1930, for the same amount and upon the same terms and conditions as the Bond now on file except with a change of Sureties, and due notice having been given the opposing party to this suit, and for good reasons shown, the application is granted.

And it is ordered that said Bond, dated May 22, 1930, for Fifteen Thousand Dollars ($15,000.00), with The Osgood Company as Principal and The United States Fidelity & Guaranty Company as Surety, be filed forthwith, and the same is hereby approved, and The American Surety Company is hereby released as Surety on the

former Bond filed herein on June 6, 1929, for Fifteen Thousand Dollars ($15,000.00).

GEO. P. HAHN,
United States District Judge.

Dated: May ...., 1930.

Entry of the foregoing Order is hereby consented to.

RICHEY & WATTS,
Dated: May 24, 1930. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,
Dated: May 24, 1930. *Attorney for Defendant.*

BOND.

(Filed May 29, 1930.)

[Case No. 965]

THE UNITED STATES OF AMERICA,
NORTHERN DISTRICT OF OHIO,
WESTERN DIVISION, ss.

Know all men by these presents that The Osgood Company, as principal and the United States Fidelity and Guaranty Company as surety, are held and firmly bound unto Keystone Driller Company in the sum of Fifteen Thousand ($15,000.00) Dollars to the payment of which they bind themselves and each of them, their successors and assigns firmly by these presents. Sealed with our seals and dated this 22 day of May, 1930.

The condition of the above bond is such, that whereas an order of the District Court of the United States for the Northern District of Ohio, Western Division, made and dated on the 22nd day of April, 1929, in a suit in equity therein pending in which suit said Keystone Driller Company is plaintiff and said The Osgood Company is defendant has denied a motion for preliminary injunction upon condition that the said defendant give to the said plaintiff a bond in the sum of Fifteen Thousand ($15,000.00) Dollars for the payment of all profits or damages that may be decreed against the said defend-

ant in said cause by reason of the infringement of the patents sued on, between the date of said Order and the final decree herein, in said cause.

Now, if the said The Osgood Company shall pay to said Keystone Driller Company all profits or damages that are decreed against said The Osgood Company in this cause for the infringement of the patents described in the bill of complaint in said cause, between April 22, 1929, the date of said order, and the final decree in said cause, then these presents and this obligation shall be void; otherwise they shall remain in full force and effect.

THE OSGOOD COMPANY,
By M. C. MCNEIL,
Secy. (Corporate Seal)

THE UNITED STATES FIDELITY AND GUARANTY COMPANY,
By LEO E. REGAN,
Attorney in Fact. (Seal)

Approved: GEO. P. HAHN,
United States District Judge.

STIPULATION RE DEPOSITIONS.

(Filed June 11, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking Depositions under the Original and the Supplemental Bills of Complaint in the above entitled case in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including June 26, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,
June 6, 1930. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,
June 5, 1930. *Attorney for Defendant.*

Approved
GEO. P. HAHN, *U. S. Dist. Judge.*

STIPULATION RE DEPOSITIONS.

(Filed June 28, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking Depositions under the Original and Supplemental Bills of Complaint in the above-entitled case, in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including July 26, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,
Attorneys for Plaintiff.

June 21, 1930.

EDWIN P. CORBETT,
Attorney for Defendant

June 20th, 1930.

It is so ordered.

GEO. P. HAHN, *Judge.*

STIPULATION RE DEPOSITIONS.

(Filed July 29, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking Depositions under the Original and Supplemental Bills of Complaint in the above-entitled case, in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including August 26, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,
Attorneys for Plaintiff.

July 21, 1930.

EDWIN P. CORBETT,
Attorney for Defendant.

July 19, 1930.

It is so ordered.

GEO. P. HAHN, *U. S. Dist. Judge.*

STIPULATION RE DEPOSITIONS.

(Filed August 27, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking Depositions under the Original and Supplemental Bills of Complaint in the above-entitled case, in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including September 20, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,

August 21, 1930. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,

August 20, 1930. *Attorney for Defendant.*

O.K.: GEO. P. HAHN, *J.*

STIPULATION RE DEPOSITIONS.

(Filed Sept. 20, 1930.)

[Case No. 965]

It is hereby stipulated by and between Counsel for the respective parties, the Honorable Court consenting, that Defendant's time for taking depositions under the Original and Supplemental Bills of Complaint in the above-entitled case, in accordance with the provisions of Equity Rule 47, shall be, and hereby is, extended to and including September 30, 1930, and the time of both parties for taking rebuttal depositions is extended accordingly.

RICHEY & WATTS,

September 18, 1930. *Attorneys for Plaintiff.*

EDWIN P. CORBETT,

September 17, 1930. *Attorney for Defendant.*

It is so ordered.

JOHN M. KILLITS, *Judge.*

ORDER EXTENDING TIME OF DEFENDANT FOR TAKING DEPOSITIONS.

(Entered September 29, 1930, by Geo. P. Hahn, Judge.)

[Case No. 965]

It is hereby ORDERED that the Defendant's time for taking depositions in both the Original and Supplemental Bills be and hereby is extended to and including October 30th, 1930.

ORDER EXTENDING TIME FOR TAKING DEPOSITIONS.

(Entered Oct. 29, 1930, by Geo. P. Hahn, Judge.)

[Case No. 965]

It is hereby ordered that the Defendant's time for taking depositions in both the Original and Supplemental Bills be and hereby is extended to and including November 30th, 1930.

GEO. P. HAHN,
United States District Judge.

ORDER EXTENDING TIME FOR TAKING DEPOSITIONS.

(Entered Nov. 26, 1930, by Geo. P. Hahn, Judge.)

[Case No. 965].

It is hereby ordered that the Defendant's time for taking depositions in both the Original and Supplemental Bills be and hereby is extended to and including December 30, 1930. This is the last extension.

GEO. P. HAHN,
United States District Judge.

November 26th, 1930.

MOTION TO COMPEL PRODUCTION AND INSPECTION OF DOCUMENTS.

(Filed Dec. 19, 1930.)

[Case No. 965]

Now comes The Osgood Company, by its attorney, and moves this Court under Equity Rule 58, for an order to compel plaintiff herein to produce for inspection of defendant, within at least five days after the granting of this motion, with the right to make copies, the following documents in plaintiff's possession or under its control and containing evidence material to the defense herein, to-wit:

1. All papers "marked for identification" by plaintiff, as plaintiff's exhibits A to I, inclusive, during the taking of the deposition of Bernard R. Clutter at Lakewood, N. J., October 21st, to 23rd, 1930.

2. The canceled check for $476.00 issued by the Keystone Driller Company on or about February 16, 1928, to Bernard R. Clutter, and referred to in the Keystone Driller Company's letter dated December 17, 1928, to Mr. Bernard R. Clutter, 17 Edgewood Court, Lakewood, N. J.

3. The original memorandum of agreement dated April 11, 1925, between Bernard R. Clutter and the Keystone Driller Company and referred to in the letter of the Keystone Driller Company to Mr. Burn R. Clutter, 17 Edgewood Court, Lakewood, N. J., dated December 4, 1928.

4. The contract, mortgage, notes, books of account, showing credits and debits relating to the Keystone Driller Company's excavator, shop number 4918 shipped to the Clutter Contracting Co., March 9, 1925, on Pennsylvania Railroad car 925186 and invoiced by the Keystone Driller Company on March 9, 1925, to Clutter Contracting Company, Lakewood, N. J., Keystone Driller Company, order No. SS-1792, and correspondence between the Keystone Driller Company and Bernard R. Clutter or The Clutter Contracting Company, relating to the said excavator.

5. The contract, mortgage, notes, books of account showing credits and debits relating to the Keystone Driller Company's excavator, shop number 5,009 shipped to the Clutter Contracting Com-

pany, Tuckerton, N. J., on July 14, 1925, on N. P. car 68,513 and invoiced by the Keystone Driller Company to the Clutter Contracting Company, Lakewood, N. J., July 14, 1925, Keystone Driller Company Order No. SS-1902, and correspondence between the Keystone Driller Company and Bernard R. Clutter or the Clutter Contracting Company relating to said excavator.

6. Any and all papers, documents, records, correspondence, reports in the possession of or under the control of the Keystone Driller Company relating to the transaction between Keystone Driller Company and Bernard R. Clutter as testified to in the deposition of Bernard R. Clutter and Frederick W. Ransom, and or relating to the memorandum of agreement between Bernard R. Clutter and the Keystone Driller Company dated April 11, 1925.

This motion is supported by the affidavits of Edwin P. Corbett and John J. Mahoney which are attached hereto and made part hereof as defendant's Exhibits A and B, respectively.

EDWIN P. CORBETT,
Attorney for Defendant.

December 15, 1930.

Notice.

Messrs. Richey & Watts,
Attorneys for Plaintiff,
1090 Union Trust Building,
Cleveland, Ohio.

Gentlemen:

Please take notice that the above Motion will be presented to his Honor, Judge Hahn, in the Court Room, Federal Building, Toledo, Ohio, on the 20th day of December, 1930, at 9:30 o'clock A. M., or as soon thereafter as counsel may be heard.

EDWIN P. CORBETT,
Attorney for Defendant.

A copy of the above Motion, Notice and Affidavits were today mailed to Messrs. Richey & Watts, Attorneys for Plaintiff, 1090 Union Trust Building, Cleveland, Ohio.

EDWIN P. CORBETT,
Attorney for Defendant.

December 15, 1930.

AFFIDAVIT OF EDWIN P. CORBETT IN SUPPORT OF MOTION.

(Filed Dec. 19, 1930.)

[Case No. 965]

STATE OF OHIO,
COUNTY OF FRANKLIN, SS.

Edwin P. Corbett, being first duly sworn, deposes and says that he is attorney for the defendant in the above-entitled cause; that the above-entitled suit is based upon alleged infringement of defendant of certain United States Letters Patent that are alleged to be owned by the Keystone Driller Company, plaintiff herein.

That one of the patents sued on by the plaintiff is the patent issued to Robert Rex Downie, an officer of the plaintiff company, United States Letters Patent No. 1,511,114; that the defendant herein has set up as a defense to the suit for infringement on Downie patent No. 1,511,114 various defenses among which is the defense that Robert Rex Downie was not the first, true or original inventor of the alleged invention described and claimed in Downie patent No. 1,511,114.

In support of its defense, as to this particular Downie patent No. 1,511,114, the defendant has taken the depositions of Bernard R. Clutter, Phil C. Culbertson, W. L. Culbertson, John Cummings, M. A. Elsner, Lysle L. Hazen, Herbert H. Wallower, which show that Robert Rex Downie was not the first, true and original inventor of the United States Letters Patent issued to him as No. 1,511,114, but that Bernard R. Clutter and Herbert A. Wallower were really the first inventors of the alleged invention described and claimed in said patent, and had publicly used the same at Joplin, Mo. in the early part of the year 1920. All of these depositions are now on file with this Court.

I have read an additional deposition, taken on the 21st, 22nd and 23rd days of October, 1930, at Lakewood, New Jersey, in which Bernard R. Clutter testified that Robert Rex Downie, Secretary and General Manager of the Keystone Driller Company, voluntarily came down to see him at Lakewood, New Jersey, in the early part of the year 1925. Clutter testified that although Downie was accompanied by another employee of the Keystone Driller Company, that he called Clutter out-

side into the yard of his home and engaged him in a private conversation.

In this conversation, Clutter said that Downie recognized that Bernard R. Clutter was the real inventor of the device patented by Robert Rex Downie in patent No. 1,511,114. From Clutter's testimony, it appears that in his conversation, Downie brought out that the Keystone Driller Company were about to bring suit on their patent No. 1,511,114 and that they wanted to make sure that Bernard R. Clutter would not disclose to any one the fact that Clutter, and not Downie, was the real inventor of the alleged invention described and claimed in said patent.

Downie's proposition to Clutter was that if Clutter would keep silent about the real facts as to the inventorship of this patent, that the Keystone Driller Company would give Clutter a one-half interest in a new Keystone excavator which credit would amount to somewhere in the neighborhood of four thousand dollars ($4,000.00); that Downie told him that if Clutter agreed to this proposition, the Keystone Driller Company would make out the papers for the machine in full, and secretly give to Clutter a credit on the Keystone Driller Company's books, amounting to approximately four thousand dollars ($4,000.00). Clutter testified that as he had never received any money for his invention that he agreed to this proposition and ordered a Keystone Driller Company excavator, which was delivered to him.

Clutter testified that subsequently the Keystone Driller Company submitted a series of papers for his signature which he was told were necessary in order to bind him hand and foot to the proposition made to him by Downie; that later, the Keystone Driller Company repossessed the machine upon which Clutter had been given the credit, but as the Keystone Driller Company's suit against The Byers Machine Company on this particular patent was still pending in Cleveland, the Keystone Driller Company apparently feared that Clutter might make known the real facts as to this particular patent and, therefore, agreed to give Clutter a cash settlement in lieu of the machine credit in the amount of approximately one thousand nine hundred and four dollars ($1904.00). Clutter further testified that upon one pretext or another, the Keystone Driller Company failed to live up to their agreement as to the cash settlement made

with Clutter but that finally after much correspondence between the parties, the Keystone Driller Company issued him a check for four hundred and seventy-six dollars ($476.00) in furtherance of this illegal transaction.

Clutter's testimony in this respect was corroborated by original letters and other papers of the Keystone Driller Company written to Clutter and introduced in evidence as defendant's Exhibits 37, 38, 39, 40 and 41. Clutter's testimony in this respect was further corroborated by the testimony of Frederick W. Ransom, a former officer of the Keystone Driller Company.

If the papers requested in the motion are produced, they will further corroborate and fully prove the testimony of Bernard R. Clutter that the Keystone Driller Company recognized and admitted that Clutter was the first and true inventor of Downie patent No. 1,511,114 in suit.

All of the papers requested in defendant's motion relate directly to and were mentioned in and referred to in the Clutter deposition above mentioned, and will be material evidence in proving defendant's claim that Downie was not the real inventor of the patent sued upon No. 1,511,114.

The papers requested in this motion are all within the possession and control of the plaintiff, and it is necessary that they be produced in order for defendant to make full proof of the defense set out in its answer that Robert Rex Downie is not the first inventor of Downie patent No. 1,511,114.

EDWIN P. CORBETT.

Sworn to and subscribed before me this 15th day of December, 1930.

JESSIE L. JORDAN,
Notary Public in and for Franklin Co.

(Seal)

My commission expires Feb. 14, 1933.

AFFIDAVIT OF JOHN J. MAHONEY IN SUPPORT OF MOTION.

(Filed Dec. 19, 1930.)

[Case No. 965]

STATE OF OHIO,
COUNTY OF FRANKLIN, SS.

John J. Mahoney, being first duly sworn, deposes and says that he is one of the Attorneys for the defendant in the above entitled cause; that he has represented The Osgood Company, defendant herein, during the taking of various depositions to be used on behalf of the defendant in the above entitled cause.

That one of the patents sued on by the plaintiff in this suit is a patent to Robert Rex Downie, an officer of the plaintiff Company, United States Letters Patent No. 1,511,114; that the defendant herein has set up as a defense to the suit for alleged infringement of said Downie patent No. 1,511,114 the fact that said patentee, Downie, was not the first, true or original inventor of the alleged invention described and claimed in said Downie patent No. 1,511,114.

In support of this defense, as to this particular patent, the defendant has taken the depositions of Bernard R. Clutter, Phil C. Culbertson, W. L. Culbertson, John Cummings, M. A. Elsner, Lysle L. Hazen, Herbert H. Wallower. All of these depositions show that Bernard R. Clutter and Herbert H. Wallower were really the first inventors of the alleged invention described and claimed in said patent in suit. The depositions of these various persons taken at Lakewood, N. J., Joplin, Mo. and Leadville, Col. show that the device shown in the Downie patent 1,511,114 was publicly used at Joplin, Mo. in the early part of 1920 by Bernard R. Clutter and Herbert H. Wallower prior to any use by the Keystone Driller Company. All of these depositions are now on file in this Court.

Deponent was present at Lakewood, N. J. on the days of October 21, 22, and 23, 1930 at the taking of the deposition of Bernard R. Clutter for use on behalf of the defendant herein. In said Deposition, Bernard R. Clutter testified that he was the same Bernard R. Clutter who had given a previous deposition in this case about the public use at Joplin, Mo. of the alleged invention shown in the Downie patent 1,511,114. In his previous deposition, Bernard R. Clutter had testified that

the officials of the Keystone Driller Company had known about his public use of this device.

Clutter testified that in the early part of the year 1925, Robert Rex Downie, an officer of the Keystone Driller Company, voluntarily came down to see him at his home at Lakewood, N. J. That with Downie at this time was a man named Howard Elmire, an employee of the Keystone Driller Company; that Downie told Clutter on this occasion that he wanted to speak to him privately and leaving Elmire in his house, they stepped out into the yard of his home, and Downie told him then that he had come to see him about the device that Clutter had publicly used at Joplin in the early part of 1920.

Downie then explained to Clutter that the Keystone Driller Company had subsequently taken out a patent on this device. Clutter said that he called Downie's attention to the fact that the Keystone Driller Company had no right to do this, as this was his invention. Downie then told Clutter that they had the patent and that Clutter did not have money enough to fight them for it. Clutter then testified that Downie informed him that the Keystone Driller Company were about to bring suit on this Downie patent 1,511,114 and that before doing this, they wanted to make sure that Clutter would not disclose to any one his public use of this device at Joplin, Mo. in the early part of the year 1920. Clutter said that Downie told him that if he would keep silent about the real facts of the inventorship of this patent, that the Keystone Driller Company would give Clutter a one-half interest in a new Keystone excavator which credit would amount to somewhere in the neighborhood of four thousand dollars; and that if Clutter would agree to this proposition, the Keystone Driller Company would make out the papers for the purchase of the machine in full and secretly give to Clutter the credit on the Keystone Driller Company's books to the amount of approximately, four thousand dollars. Clutter testified that as he had never received any money for his invention that he agreed to this proposition and ordered a Keystone Driller excavator, which was later delivered to him.

Clutter testified that subsequently the Keystone Driller Company submitted a series of papers for his signature which he was told were necessary in order to "bind him hand and foot" to the proposition made to him by Downie; that later, The Keystone Driller Company repossessed the machine upon which Clutter had

been given the credit, but as the Keystone Company's suit against The Byers Machine Company on this particular patent was still pending in Cleveland, the Keystone Driller Company apparently feared that Clutter might make known the real facts as to this particular patent and therefore, agreed to give Clutter a cash settlement in lieu of the machine credit in the amount of approximately $1904.00. Clutter further testified that upon one pretext or another, the Keystone Driller Company failed to live up to their agreement as to the cash settlement made with Clutter but that finally after much correspondence between the parties, the Keystone Driller Company issued him a check for $476.00 in furtherance of this illegal transaction.

Clutter's testimony in this respect was corroborated by original letters and other papers of the Keystone Driller Company written to Clutter and introduced in evidence as defendant's Exhibits 37, 38, 39, 40 and 41. Clutter's testimony in this respect was further corroborated by the testimony of Frederick W. Ransom, a former officer of the Keystone Driller Company, in a deposition taken at Akron, Ohio, October 24, 1930 now on file in this Court.

Deponent further states that all of the papers described in paragraphs 1 to 6 inclusive of defendant's motion relate directly to the said transaction between the Keystone Driller Company and Bernard R. Clutter as set forth in the Clutter deposition at Lakewood, N. J., October 21 to 23 inclusive, 1930.

There is no question but what all of these papers are in the possession of or under the control of the Keystone Driller Company. Deponent knows that Counsel for plaintiff called the Keystone Driller Company on long distance telephone and requested that all of the papers described in paragraph 1 of this motion be sent down to him from Beaver Falls, Pa. and that the next day, a messenger from the Keystone Driller Company delivered these papers to Counsel for plaintiff. Counsel for plaintiff, A. H. Edgerton, has since advised deponent that all of the papers described in paragraph 1 of defendant's motion were again turned back by him to the Keystone Driller Company.

As to the other papers referred to in paragraphs 2 to 6 inclusive of defendant's motion, the witness Clutter testified that they were executed by him and turned over to the Keystone Driller Company and must necessarily

then be in the possession of the Keystone Driller Company, or under its control.

In addition to the depositions of the witnesses previously referred to, to the effect, that the alleged invention described and claimed in the Downie patent 1,511,114 was really the invention of Clutter and Wallower, the papers requested in this motion will further prove that this fact was recognized by the Keystone Driller Company, and these papers are therefore all material to the defense of the defendant that Robert Rex Downie was not the first, original or true inventor of the alleged inventions described and claimed in United States Letters Patent No. 1,511,114. Deponent believes that if the papers requested are produced they will enable defendant to make full proof of this fact.

Deponent further believes that the plaintiff should be compelled to produce these papers within at least five days from the granting of this motion because they consist of books of accounts, letters, contracts, and other documents that will require considerable study and because the taking of this testimony has been limited by the Court to December 30, 1930; and that as this plaintiff is located out of the district and more than one hundred miles from place of trial herein, it will be impossible for the defendant to subpoena or take the testimony of any witnesses if inspection of the papers requested in this motion shows that this should become necessary unless the defendant is given prompt access to these papers before its time for taking testimony expires.

Deponent believes that defendant is entitled to production and inspection of all of the papers in question in this motion because they contain evidence material to the defense, that the patentee, Downie, of United States Letters Patent No. 1,511,114 is not the true inventor of the alleged invention described in claim therein. The papers are all within the possession or control of the plaintiff, and should therefore be produced for inspection of defendant in accordance with the provisions of Equity Rule 58.

JOHN J. MAHONEY.

Sworn to and subscribed before me, this 15th day of December, 1930.

JESSIE L. JORDAN,
Notary Public in and for Franklin Co.

(Seal)
My Commission Expires Feb. 14, 1933.

AFFIDAVIT OF A. H. EDGERTON.

(Filed Dec. 20, 1930.)

[Case No. 965].

STATE OF OHIO,
COUNTY OF CUYAHOGA, SS.

A. H. Edgerton, being duly sworn deposes and says:

I am counsel for the Plaintiff herein, Keystone Driller Company. I was out of the city engaged in taking depositions the early part of this week, returning to Cleveland Thursday, the 18th of December. Upon my return I found the Motions of The General Excavator and The Osgood Companies which were received in this office on the 16th and 17th of December respectively. My associates in this office immediately advised our local solicitor, Mr. Kirk, of my absence from the city and inability to prepare for the attendance at the hearing requested Saturday, December 20th. This office also communicated with counsel for the Defendants requesting additional time be granted for the hearing of said Motion. Counsel for the Defendants, however, would not concede to this request unless we gave them another thirty day extension for taking depositions which was rejected by my associates.

This office then forwarded our associate, Mr. Kirk, an Order requesting more time be granted to prepare for the hearing, but we were advised this morning that the same had been denied because of the absence from the city of Mr. Williams, associate for Defense counsel, and his assent thereto.

Affiant has communicated with Mr. Downie but has been unable, with the short notice, to prepare for the hearing on the Motion, Saturday, December 20th.

On information and belief affiant avers that Robert Rex Downie is the inventor of the machine shown in patent No. 1,511,114 in suit which was assigned to The Keystone Driller Company before October 7th, 1924. That he made the invention of this machine before he learned of the Clutter machine or the experimental use of that machine which was referred to in the affidavits submitted with the Defendants' motions. After Mr. Downie learned of the Clutter machine and its experimental use, he made an investigation of the same through employees of the Keystone Driller Company and others. He learned that the use had been experimental and that the machine had been abandoned. He also learned of the

character of the machine and found that it did not contain the inventions of the machine of patent No. 1,511,-114. Therefore he proceeded to file the application from which patent No. 1,511,114 issued.

At the time the Keystone Driller Company contemplated bringing suit upon this patent, he made a further investigation of the Clutter machine and its experimental use and found further his information and conclusions to be correct. Among those who affirmed this information and these conclusions was Bernard R. Clutter, who furnished him an affidavit to that effect which will be produced at the trial in this case and made part of the evidence in the case, if the Court considers it material.

Counsel for the Defendants have already inspected papers marked by the Plaintiff for identification A to I inclusive.

Affiant not being afforded sufficient time to prepare for the hearing on the Defendant's Motion on December 20th, is respectfully submitting herewith the Plaintiff's memorandum relating to this matter.

A. H. EDGERTON.

Subscribed and sworn to before me this 19th day of December, 1930.

J. D. DOUGLASS,

(Seal) *Notary Public.*

My Commission Expires July 21, 1933.

AFFIDAVIT OF F. O. RICHEY AND A. H. EDGERTON.

(Filed Dec. 31, 1930.)

[Case No. 965]

STATE OF OHIO,
COUNTY OF CUYAHOGA, SS.

F. O. Richey and A. H. Edgerton being duly sworn, depose and say:

We are members of the firm of Richey & Watts, who have and do represent the Plaintiff in numerous suits brought upon the Downie patent No. 1,511,114, includ-

ing the Byers case which has been decided by the Court of Appeals and the two suits at bar. One or both of us have been closely associated with the litigation over this patent ever since it was instituted. Mr. Richey has conducted all of these suits for the Plaintiff, and Mr. Edgerton has assisted in all of them and has attended the taking of all of the depositions taken in the above entitled case, including those by Mr. Clutter.

We are familiar with the testimony regarding the Joplin experiment and with the machine said to have been used therein and illustrated in Defendant's Exhibit 26. In the opinion of both and each of us the work at Joplin was an abandoned experiment and the machine illustrated in Exhibit 26 embodies none of the inventions of the Downie patent No. 1,511,114, and is described by none of the claims in that patent. In our opinion the machine illustrated in Exhibit 26 is not capable of operating and did not operate according to the machine of the said Downie patent or realized the advantages or results of that machine upon which its patentability has been sustained by Judge Jones or the Court of Appeals in this Circuit.

The Joplin machine contains certain elements and operates in certain respects as does the machine of the patent, but that is true of a great many of the machines relied upon by the Defendant in the Byers case, and was not sufficient to defeat the patentability of the machine in the courts. Many of the operations and functions of the machine of the patent are not even claimed by Defendant's witnesses to have been realized by the machine of Exhibit 26 and at least one such that some of the witnesses claim, in our opinion, the machine of Exhibit 26 is clearly incapable of performing.

We have gone over the brief filed with this affidavit and we are informed and believe that the facts stated in said brief on information and belief are true.

In coming to the conclusion that the Joplin work was an abandoned experiment we have been persuaded by the holding of the Supreme Court in *Elizabeth vs. Pavement,* 97 U. S. 126, and by the Court in this District (Westenhaver, *J.*) in *Buckeye vs. Wolf,* 291 Fed. 253 which was affirmed by the Court of Appeals in this Circuit in *Wolf vs. Buckeye,* 296 Fed. 680, which has further been affirmed by numerous other courts on the patents involved in those suits.

(*Buckeye v. Cooley,* 17 Fed. (2d) 453, C. C. A. 3d Cir.;
Buckeye v. Petersine, 19 Fed. (2d) 721, C. C. A. 6th Cir.;
Buckeye v. Hillpot, 24 Fed. (2d) 341, C. C. A. 3d Cir.;
Buckeye v. Blum, 27 Fed. (2d) 333, C. C. A. 6th Cir.).

Further affiants sayeth naught.

F. O. RICHEY,
A. H. EDGERTON.

Sworn to before me and subscribed in my presence this 29th day of December, 1930.

J. D. DOUGLASS,
Notary Public.

(Seal)
My Commission Expires July 21, 1933.

AFFIDAVIT OF ROBERT REX DOWNIE.

(Filed Dec. 31, 1930.)

[Case No. 965]

STATE OF OHIO,
COUNTY OF CUYAHOGA, SS.

Robert Rex Downie, being duly sworn, deposes and says:

I am the inventor of patent No. 1,511,114, and I am an officer of the Plaintiff company.

I invented the excavating machine disclosed in that patent prior to learning anything about the machine or the experiment at Joplin. News came to me of the Joplin machine and experiment, however, before I filed my patent application from which the said patent issued.

As soon as I learned of the Joplin machine and experiment, I investigated the same and reported what I learned about the machine and the experiment to Mr. E. G. Siggers of Washington, D. C. who was at that time our patent attorney, and who is now deceased. I also reported to him my own work on the machine of the patent. Mr. Siggers reported that the Joplin experiment was an abandoned experiment. He also advised that the patent application should be filed in my name which was done at his advice. He prepared the application for the patent, advising me that it did not embody any invention in the Joplin machine and accordingly I signed the same and it was filed.

I have examined the machine illustrated in Defendant's Exhibit 26 and have read the testimony given in connection therewith by witnesses called for the Defendant. I find that none of the inventions in the Downie patent No. 1,511,114 are embodied in this machine. I find that the machine illustrated in Exhibit 26 is incapable of performing the important functions of the patented machine or of operating as the patented machine does. After the infringement of this patent by The Byers Company, I made further investigations regarding the Joplin experiment and the Joplin machine for the purpose of submitting this information to Mr. Phillip E. Siggers and to Mr. Janney of the patent law firm of Emery, Booth, Janney & Varney. Among those whom I interviewed was Mr. Burn Clutter who had been associated with the Joplin machine and the Joplin experiment. I had known Mr. Clutter for a number of years. He had at one time been employed by our company and we had had considerable dealings with him and were familiar with his character and disposition. I was interested that the facts which he reported to me about the Joplin experiment and the Joplin work and which I reported to my patent lawyers should be preserved, as I did not want him later to change his story. It also occurred to me that there might be some patentable invention about the ditcher scoops which were employed on the Joplin machine and whose history after they were removed from the machine I was unfamiliar with. I knew the Joplin machine had been dismantled and abandoned, but I did not know what had become of the scoops that were used upon it.

At that time Mr. Clutter wanted to buy an excavator and did not have the money to buy it. Accordingly, I

made him a proposition to waive the final payments on such a machine if he would assign to the Keystone Driller Company a quit claim to all right, title and interest he had in the excavator scoops and furnish me an affidavit containing the information which he had given me regarding the Joplin machine and the Joplin work in order that I would be protected as against what I reported to the patent lawyers. Mr. Clutter told me and stated in his affidavit among other things, as follows:

> "Experimentation was abandoned; and so far as I was concerned this was because of the extreme care required to make the device as a whole operative especially the latching arrangement; and because I did not conceive the advantage of the dumping bottom to be of sufficient practical worth to justify the expense of the re-design and further experimentation which would have been necessary in my opinion to make the device commercially useful."

I did not ask Mr. Clutter to sign the affidavit until he had fully considered the same and read it over. What he told me about the abandonment of the machine and experiment had been also told me by others who had seen or worked with the Joplin machine and experiment. The proposed deal by us is set forth in the Memorandum Agreement marked "Appendix A" and attached to the brief filed herewith, though this Memorandum was never signed by the parties. There was no other Memorandum of Agreement oral or written between Mr. Clutter and me, or the Keystone Driller Company regarding this matter.

My purpose in making the waiver of the payments contingent upon the success of the patent litigation was that if the patents on the excavator failed, even a quit claim upon any invention in the scoops would be of little or no value to us.

I then submitted the information I had gathered from Mr. Clutter and others regarding the Joplin machine to Mr. Phillip E. Siggers and to Mr. Janney. Both advised that in their opinion the Joplin experiment was an abandoned experiment and the Joplin machine did not anticipate or negative the novelty of the patent, No. 1,511,114. Later the same questions were submitted to F. O. Richey of Richey & Watts and he rendered the same opinion. After receiving the opinions of Mr. Janney and Mr. Phillip E. Siggers, the suit was instituted

against The Byers Company and was decided in our favor in January, 1929.

In the meantime Mr. Clutter had begun to default on his payments and it was necessary for the company to re-possess the machine. It was then, and not until then, that Mr. Clutter began to intimate that he understood that one of the considerations for the waiving of these payments was his concealing or suppressing the testimony, although I had made no such agreement with Mr. Clutter. Our reply to him was that he was at liberty to tell any and everybody he pleased about the Joplin machine and Joplin experiment, as we had fully investigated the same and submitted it to our attorneys who had reported that it was an abandoned experiment and did not anticipate anyhow. We also told Mr. Clutter what he well knew that the Joplin machine and Joplin experiment were known to a number of people. Then we went ahead and repossessed the machines. We heard little more from Mr. Clutter until after Judge Jones decided the Byers case in our favor and the patents became valuable. Then Mr. Clutter again approached us in such a manner and with such words as to lead us to believe that he was proposing that for compensation from us he would remain silent or conceal what he knew about the Joplin work and machine. We were also approached by his brother, Mr. B. C. Clutter, and by Mr. George E. Wagner, a friend of Mr. Clutter, in such a manner and with such words as to lead us to believe that they were either acting for themselves or for Mr. Burn Clutter in making similar proposals to us. In consequence we wrote to Mr. B. C. Clutter the letter attached to the brief filed herewith and marked "Appendix B" and to Mr. Wagner the letter attached to the brief and marked "Appendix C". We received a letter from Mr. Wagner written on behalf of himself and Mr. B. C. Clutter, denying that they had in mind making any proposal to us to suppress or conceal any evidence for a compensation.

We heard no more of this matter until the Defendant in this case served notice of the taking of the testimony of Mr. Burn Clutter.

I have read the depositions given by Mr. Clutter in this case. I attended the first deposition. During a recess in the first deposition Mr. Clutter asked for a conference with me after the termination of the deposition. This conference was never had and later he returned and gave the second deposition. I have read over

the second deposition, particularly the reports he has made of the interviews he had with me and I deny that I either at the interviews which he reported, or at any other time, made him any offer or made any request that he either suppress or conceal any evidence regarding the Joplin machine or the Joplin experiment. Manifestly, it would have been absurd for me to make such an offer had I been disposed to do so, which I was not, because all the evidence which Mr. Clutter had about either the Joplin machine or experiment was known to a half dozen or more other people, most of whom were not in our employ and some of whom had been released from our employ since the experiment was made.

ROBERT REX DOWNIE.

Subscribed and sworn to before me this 30th day of December, 1930.

FLORENCE KOFSKY,
Notary Public.

(Seal)

OFFER BY PLAINTIFF TO PRODUCE LETTERS, DOCUMENTS, ETC.

(Filed Dec. 31, 1930.)

[Case No. 965]

Now comes the Plaintiff and offers to submit to counsel for the Defendant in the above entitled cause, for inspection, all of the letters and other documents which are marked for identification by Plaintiff's counsel in the above entitled cause, the cancelled check and the Memorandum Contract, the mortgages, notes, etc. and all of the correspondence between Clutter and his company, on the one hand, and Plaintiff, on the other hand, regarding the two excavating machines which were

repossessed by the Plaintiff from Mr. Clutter and concerning which Mr. Clutter testified; this submission and inspection to be at the office of Richey & Watts, 1090 Union Trust Building, Cleveland, Ohio, at a time in the near future suitable to counsel for both parties. And, moreover, Plaintiff offers to furnish, at Defendant's expense, to Defendant's counsel, copies of any of these documents which Defendant's counsel will agree to offer in evidence at the hearing in the above entitled cause.

This offer is made without Plaintiff conceding that any of these documents or letters are material to any issue in this cause and without waiving any right to object or to move to strike out, or to take other action, regarding such letters and documents, or any evidence concerning the same.

RICHEY & WATTS,
Counsel for Plaintiff.

SECOND AFFIDAVIT OF JOHN J. MAHONEY.

(Filed Jan. 2, 1931.)

[Case No. 965]

STATE OF OHIO,
COUNTY OF FRANKLIN, SS.

John J. Mahoney, being first duly sworn, deposes and says that he is one of the attorneys for defendant in the above entitled case and that he has read Plaintiff's Second Brief on Motion to Produce certain documents in the above-entitled case and particularly that portion of the brief beginning on page 4 and which reads as follows:

"No demand or request has been made by either Defendant upon the Plaintiff for the inspection of

any letters or other documents which has been refused (except the affidavit when first produced and which has since been submitted to and inspected by counsel for each of the Defendants). The motions are made without any previous demand or request upon Plaintiff for the documents now demanded in the motions."

The above quoted statement is untrue. At the taking of the Bernard R. Clutter deposition at Lakewood, N. J., October 21 to 23, 1930, inclusive, deponent began to make notes of the contents of the papers produced for identification as Plaintiff's Exhibits A to I, inclusive, which are requested in paragraph 1 of this Motion, and thereupon Mr. A. H. Edgerton, who was Counsel for the Plaintiff at that hearing, voluntarily promised deponent and Mr. Edward L. Reed, Counsel for the Defendants at that hearing, photostatic copies of the documents offered for identification by Plaintiff as Exhibits A to I, inclusive, as soon as he returned to Cleveland, telling us that it would therefore be unnecessary to make any copies of the documents in question. After the testimony session was ended, Counsel for Defendant waited several days for these papers and then called Mr. A. H. Edgerton on the long distance telephone and tried to find out when we would be furnished with the papers promised us. Counsel for Plaintiff, Mr. Edgerton, made some sort of an excuse to the effect that papers were being used for some purpose and that we would be furnished with these copies later on. Counsel for Defendant therefore waited for several more days but not hearing from Counsel for Plaintiff on November 4, 1930, made a written demand for the papers referred to in paragraph 1 of this Motion. A copy of this written demand, dated November 4, 1930, addressed to Messrs. Richey & Watts, 1090 Union Trust Building, Cleveland, Ohio, is attached hereto as "Exhibit A" and made a part hereof.

In addition to this written demand, deponent subsequently upon various occasions made further oral demands and requests that documents be furnished to Counsel for Defendant. At no time did Mr. A. H. Edgerton deny that these documents had been promised to Counsel for Defendant but always gave as reasons for not having complied with this promise, the fact that the documents were in the hands of Mr. Downie or were be-

ing used by them for investigation purposes, or gave other vague reasons for not producing these papers.

Counsel for Defendants were, therefore, led to believe all the time, and for several months that eventually these documents would be turned over to them. Even as late as a day or two before filing this present Motion, deponent called Mr. A. H. Edgerton, Counsel for Plaintiff, on the long distance telephone, at Cleveland, Ohio, and made a further request for these various documents. Upon this occasion, Mr. Edgerton gave the usual excuse that these documents were going to be used by him for some investigation and that he could not turn them over at that time. It therefore became evident to Counsel for Defendant that Mr. A. H. Edgerton had no intention of keeping his promise to turn over these papers to Counsel for Defendant and this motion was then brought.

I have read the Affidavit of Robert Rex Downie, dated December 30, 1930, and filed herein, and particularly that part of the Affidavit that reads as follows: Page 4, lines 10 to 21 inclusive—

> "In the meantime Mr. Clutter had begun to default on his payments and it was necessary for the company to repossess the machine. It was then, and not until then, that Mr. Clutter began to intimate that he understood that one of the considerations for the waiving of these payments was his concealing or suppressing the testimony, although I had made no such agreement with Mr. Clutter. Our reply to him was that he was at liberty to tell any and everybody he pleased about the Joplin machine and Joplin experiment, as we had fully investigated the same and submitted it to our attorneys who had reported that it was an abandoned experiment and did not anticipate anyhow * * *."

I have also read the Plaintiff's Second Brief on this Motion, filed December 31, 1930, and particularly that portion of the brief, page 14, which reads as follows:

> "(2) If Plaintiff or Mr. Downie were undertaking to suppress Mr. Clutter's testimony, they would never have repossessed the machines, particularly in the face of his threats to disclose the evidence if they did repossess them."

The statements of Mr. Downie, and the statement in the Brief above quoted are at variance with Mr. Clut-

ter's testimony in the deposition taken at Lakewood, N. J., October 21 to 23, inclusive, as well as statements which appear in letters addressed to Bernard R. Clutter by the Keystone Driller Company as to what took place when they threatened to repossess the machines in question from Mr. Clutter. Mr. Clutter's testimony in this regard reads as follows: Bernard R. Clutter's deposition, Oct. 21 to 23, 1930, page 17.

"Q. 104. Will you relate as nearly as you can the conversation you had with Mr. Rex Downie on this occasion near Roseland, N. J."

"A. Rex informed that they would have to take the machine back unless I could raise the money immediately, or a portion of it. I informed him that if he took the machine away from me that it meant that I would lose anything that I might realize from the patent on the drop bottom ditcher scoop, and that if he did take the machine away that it was not going to do him any good. He said that he did not want me to feel that way about it, and I informed him that those were the facts and he could take it or leave it, and that eventually I could pay him every cent that I owed the company for that machine. He then offered to substitute a cash proposition instead of the credit proposition that I was formerly to have on the machine. His proposition was that they pay me half the amount of the anticipated credit in cash * * * ."

"Q. 106. By credit proposition do you mean the proposition that Rex made to you in the early part of 1925 at Lakewood agreeing to give you a half interest in a Keystone excavator in consideration of your keeping quiet about the development you made on the drop bottom instroke scoop at Joplin, Missouri."

"By Mr. Edgerton: Objected to as leading."

"A. I do."

"Q. 107. The cash proposition then was to be a substitute for the credit proposition that was made to you at Lakewood in 1925."

"A. It was."

"Q. 108. Was the amount of the cash consideration they were to give you as a substitute for the machine credit, mentioned at Roseland in your conversation with Mr. Downie?"

"A. It was gone into and estimated that it would amount to around $2,000.00, and after it was totalled up the deductions on the parts and credits for the attachments at Arlington, that I was to have from the Keystone Driller Company on the machine amounted to $3800.00. Therefore the cash proposition amounted to $1904.00."

"Q. 109. And you agreed to accept this cash consideration in lieu of the machine credit which had been granted to you on the machine you purchased from the Keystone Driller Company in the year 1925."

"A. I did."

Mr. Clutter's testimony in this regard as to what took place when they took over these machines is corroborated by the letter dated November 23, 1928, from the Keystone Driller Company to Burn Clutter, Lakewood, N. J., introduced in evidence as Defendant's "Exhibit No. 38," which reads as follows:

"KEYSTONE DRILLER COMPANY
Beaver Falls, Pa.
November 23, 1928.

Mr. Burn Clutter,
17 Edgewood Court,
Lakewood, N. J.

Dear Burn:

We have your letter of November 15th and are glad to see that you are still able to argue fluently. Writer has referred to our letter of February 16th with which we enclosed check for $476.00 and by the receipt of which you indicated your satisfaction with the amount of $952.00 as the contingent cash credit substituted for the original machine credit,—which in turn went astray because of our having to take the machine back.

Now the other half of the contingent cash was not to become payable until and unless our case should be satisfactorily decided by the end of 1928. No decision has been made as yet. The case drags for various reasons.

If your parts account has been in good shape writer would have no difficulty in securing general approval of these cash remittances, but the fact is the accounting department is being held out of a

substantial parts bill which amounts to more than the contingent credit which you still have and which will become due in case the case is settled in accordance with our original deal by the end of 1928.

This leaves the writer nothing to do except point out that you owe us more than we would owe you even if the case were settled,—and that the case is not in fact settled. Hence we cannot say that we feel that there is anything due you under these circumstances.

Writer is sorry that we cannot do any better, but feels that we have no reason to actually exceed the spirit of the deal as made. (Instead we will sell you another machine some day, or Mr. Elmire and I will come down and bum another shore dinner the next time we are in Jersey, and we'll stick Elmire for the smokes.)

Yours truly,

KEYSTONE DRILLER COMPANY.

RRD:FB (Signed) REX DOWNIE."

This testimony and the Keystone Driller Company's letter written as late as November 23, 1928, introduced in evidence as Defendant's Exhibit No. 38, apparently throws a different light on this situation from that shown in the quoted portion of the Downie affidavit and the Plaintiff's Brief quoted above. From the Clutter testimony above quoted and the portion of Defendant's Exhibit No. 40, Keystone Driller Company's letter, it is apparent that they did not defy Clutter and that the machines were not repossessed from Clutter until they had agreed to give him a cash credit as a substitute for the machine credit which they had previously granted him.

In the Second Brief of Plaintiff on this Motion, great reliance is placed upon the decision in the Cleveland case against the Byers Company by Judge Jones and which was sustained by the Court of Appeals. In Plaintiff's First Brief on this Motion, page 2, we read as follows:

"We do not deny that Clutter and Wallower devised a certain machine and used it in the early part of 1920."

Mr. Rex Downie in his affidavit filed herein on this Motion, dated December 30, 1930, stated that the mat-

ter of the Clutter and Wallower development at Joplin, Missouri, had been submitted to F. O. Richey, of Richey & Watts. This testimony shows that Clutter and Wallower used skimmer scoops, and attached them rigidly to an instroke ditching machine in the early part of 1920, and it appears from the affidavits of Downie and the brief filed by Counsel for Plaintiff herein that the evidence of this development by Clutter and Wallower was submitted to Counsel for Plaintiff and was passed upon by them, and yet in presenting their case before the District Court at Cleveland in the Byers suit we read on page 32, of the brief filed by Plaintiff the following:

> "On the other hand there were perhaps a thousand skilled mechanics working daily with the five or six hundred Clutter machines used. All these mechanics experienced the inconveniences of the shortcomings of the Clutter machine, also were familiar with the drop ends or bottoms in the steam shovels and skimmers which were often working on the same job with the Clutter ditcher. All were familiar with the advantages of dumping through an openable part of the scoop, many had operated shovels and skimmers in that way, *yet not one of these mechanics saw how to apply the drop part principle to the Clutter machine* * * *." (Italics ours.)

This statement was also incorporated in Plaintiff's Brief on Appeal in the Byers suit before the U. S. Court of Appeals of the Sixth Circuit on page 45.

On page 30 of the Brief filed by the Plaintiff in the District Court in the Byers suit in Cleveland and on page 43 of the Plaintiff's Brief on Appeal the following statement is made:

> "If new results are the test of invention, it is present here. Nobody before Downie had conceived how a dump bottom could be mounted and operated in an inward arc machine or otherwise had seen how the bottom could be closed or operated to dislodge the sticking spoil or to root in the trench. Nobody had been able to do that before."

In the Cleveland suit there were 154 pages of testimony given by Robert Rex Downie. The only other witness to testify at any length at the open trial was an expert by the name of Sessions. He gave 77 pages of typewritten testimony. It will therefore be seen that

the case in the Cleveland Court was presented and rested almost entirely upon the testimony of Robert Rex Downie.

JOHN J. MAHONEY.

Sworn to before me and subscribed in my presence this 1st day of January, 1931.

JESSIE L. JORDAN,

(Seal) *Notary Public, Franklin County, Ohio.*

My commission expires February 14th, 1933.

"EXHIBIT A."

November 4, 1930.

Messrs. Richey & Watts,
1090 Union Trust Building,
Cleveland, Ohio

(Attention: Mr. A. H. Edgerton)

Gentlemen:

During the taking of the Bernard R. Clutter deposition at Lakewood, N. J., October 21 to 23, Mr. Edgerton agreed to furnish us at once photostatic copies of various papers marked for identification as plaintiff's exhibits A to I inclusive.

To date, these papers have not yet been received and we would appreciate it very much if you would see that we are furnished these photostatic copies as soon as possible in view of the fact that our time for taking depositions is now running.

Yours very truly,

JJM:ME CORBETT & MAHONEY.

Copy to—Mr. Edward L. Reed, Reibold Building, Dayton, Ohio.

NOTICE UNDER REVISED STATUTES OF UNITED STATES, SECTION NO. 4920.

(Filed Feb. 3, 1931.)

[Case No. 965]

Messrs. Richey & Watts,
1090 Union Trust Building,
Cleveland, Ohio,
Attorneys for Plaintiff.

Please take notice in accordance with Section 4920 of the United States Revised Statutes, that at the trial of this case the defendant, in addition to the patents, printed publications, instances of public use or sale, prior knowledge, prior use or prior invention set up in its Answer herein, will also show:

1. That LeRoy P. Clutter was not the original and first inventor or discoverer of the invention alleged to be described and claimed in the said Letters Patent No. 1,317,431, or of any material or substantial part thereof, but that the same and all material or substantial parts thereof had been patented or described in patents filed prior to the date of the alleged invention of the said LeRoy P. Clutter; and that said patent is void and invalid because the alleged invention has been patented or described in printed publications prior to said Clutter's supposed invention or discovery thereof, or more than two years prior to his application for a patent therefor, as follows:

UNITED STATES PATENTS.

Patentee	*Number*	*Issued*
A. N. Cross,	418,311,	Dec. 31, 1889
A. N. Cross,	808,345,	Dec. 26, 1905
J. J. Benedick,	876,517,	Jan. 14, 1908
J. C. Boehm,	999,953,	Aug. 8, 1911
Geo. W. King,	579,589,	Mar. 30, 1897

FOREIGN PATENTS.

Great Britain,	H. Jubb,	No. 11,496, of 1903
Great Britain,	T. Whitaker,	No. 9,893, of 1899

PUBLICATIONS.

Pages 102, 103, 104, 130, 131, 132, 133, 157, 158, 159, 160 and 161, of "Excavating Machinery," by Allen Boyer McDaniel, Published 1913 by McGraw-Hill Book Company, Inc., 239 West 39th Street, New York, N. Y.

2. That the alleged invention and improvement described and claimed in said Letters Patent No. 1,317,431, and all substantial and material parts thereof were publicly known to and used by the following persons at the places indicated prior to any invention thereof by the said LeRoy P. Clutter, and more than two years prior to the filing of an application for said Letters Patent, as follows:

"Daniel H. Mahoney Machine" manufactured by Daniel H. Mahoney, of North Bend, Ohio, and used at Vincennes, Indiana, and vicinity, at Gorham, Illinois, at Knox County, Indiana, near West Phalia, Indiana, Edwardsport, Indiana, and elsewhere, as shown by the depositions of Daniel H. Mahoney, L. B. Reed, Frank J. Kapps, Frank A. Lang, Winn H. Reed, Robert E. Lind, William Stein, D. H. Bond, John W. Lenahan, Lyman Barekman, Ernest H. Vollmer, Thomas G. Dunn, Joseph Moschenrose, William Bradshaw, Henry Stone, George Stone, George DeRemo, Joseph Glenn, C. Crain, Eugene W. Johnson, taken and filed in this case.

A "Back Action" excavator which was manufactured and sold by The Vulcan Iron Works Company, at Toledo, Ohio, and which was publicly used by the Gillespie Company, of Pittsburgh, Pennsylvania, at Allegheny, Pennsylvania, Passaic, New Jersey, Ponton Plains, New Jersey, Minneapolis, Minnesota, by Anderson Bros. at St. Louis, Missouri, Farley & Green, at Chicago, and elsewhere in the United States, as shown by the depositions of John W. Webber and Walter S. Culver, taken and filed herein.

A Fairbanks Excavator manufactured and sold by The Fairbanks Steam Shovel Company, of Marion, Ohio, and publicly used by George A. Castle, at Crookeston, Minnesota, and by the San Benito Land & Water Company or Rio Grande Construction Company, at San Benito, Texas, as shown by the deposition of William Mitchell, taken and filed herein.

A "Back Action" shovel manufactured and sold by the Marion Steam Shovel Company, of Marion, Ohio, and which was publicly used by the Charleston South Carolina Mining & Manufacturing Company, near Charleston, South Carolina, and at Bartow, Florida, as shown by the deposition of Frank H. King, taken and filed herein.

By a similar machine manufactured by the Marion Steam Shovel Company, Marion, Ohio, and sold, more than two years prior to filing of the said LeRoy P. Clutter patent, to the following Companies:

Charleston, South Carolina Mining and Manufacturing Company, at Charleston, South Carolina.

Dunnellon Phosphate Company, Dunnellon, Florida.

Bartow Phosphate Company, Bartow, Florida.

A. N. Cross, of Tomah, Wisconsin, in Minnesota, Iowa and Nebraska.

3. That Robert Rex Downie was not the first inventor or discoverer of the invention alleged to be described and claimed in said Letters Patent No. 1,511,114, or any material or substantial part thereof, but that the same and all material or substantial parts thereof had been patented or described in patents filed prior to the date of the alleged invention of the said Robert Rex Downie; and that said patent is void and invalid because the alleged invention has been patented or described in printed publications prior to said Clutter's supposed invention or discovery thereof, or more than two years prior to his application for a patent therefor, as follows:

UNITED STATES PATENTS:

Patentee	*Number*	*Issued*
P. Howard,	674,417,	May 21, 1901
F. E. Kersey,	881,695,	Mar. 10, 1908
A. W. Robinson,	1,047,991,	Dec. 24, 1912
L. P. Clutter,	1,107,899,	Aug. 18, 1914
G. E. Wagner, et al.,	1,476,121,	Dec. 4, 1923

FOREIGN PATENTS.

Great Britain,	T. Whitaker,	No. 9,893, of 1899
Great Britain,	H. Jubb,	No. 11,496, of 1903
Great Britain,	P. W. D'Alton,	No. 655, of 1882

PUBLICATIONS.

Catalogue, Copyrighted 1909 by American Hoist & Derrick Company, of St. Paul, Minnesota.

4. That the alleged invention and improvement described and claimed in said Letters Patent No. 1,511,114, and all material and substantial parts thereof were publicly known to and used by the following persons at

the places indicated prior to any invention thereof by the said Robert Rex Downie, and more than two years prior to the filing of an application for Letters Patent, as follows:

"Daniel H. Mahoney Machine" manufactured by Daniel H. Mahoney, of North Bend, Ohio, and used at Vincennes, Indiana, and vicinity, at Gorham, Illinois, at Knox County, Indiana, near West Phalia, Indiana, Edwardsport, Indiana, and elsewhere, as shown by the depositions of Daniel H. Mahoney, L. B. Reed, Frank J. Kapps, Frank A. Lang, Winn H. Reed, Robert E. Lind, William Stein, D. H. Bond, John W. Lenahan, Lyman Barekman, Ernest H. Vollmer, Thomas G. Dunn, Joseph Moschenrose, William Bradshaw, Henry Stone, George Stone, George DeRemo, Joseph Glenn, C. Crain, Eugene W. Johnson, taken and filed in this case.

A "Back Action" excavator which was manufactured and sold by The Vulcan Iron Works Company, at Toledo, Ohio, and which was publicly used by the Gillespie Company, of Pittsburgh, Pennsylvania, at Allegheny, Pennsylvania, Passaic, New Jersey, Ponton Plains, New Jersey, Minneapolis, Minnesota, by Anderson Bros., at St. Louis, Missouri, Farley & Green, at Chicago, and elsewhere in the United States, as shown by the depositions of John W. Webber and Walter S. Culver, taken and filed herein.

A Fairbanks Excavator manufactured and sold by The Fairbanks Steam Shovel Company, of Marion, Ohio, and publicly used by George A. Castle, at Crookeston, Minnesota, and by the San Benito Land & Water Company, or Rio Grande Construction Company, at San Benito, Texas, as shown by the deposition of William Mitchell, taken and filed herein.

A "Back Action" shovel manufactured and sold by the Marion Steam Shovel Company, of Marion, Ohio, and which was publicly used by the Charleston South Carolina Mining & Manufacturing Company, near Charleston, South Carolina, and at Bartow, Florida, as shown by the deposition of Frank H. King, taken and filed herein.

By a similar machine manufactured by the Marion Steam Shovel Company, of Marion, Ohio, and sold, more than two years prior to the filing of the said Robert Rex Downie patent to the following Companies:

Charleston, South Carolina Mining & Manufacturing Company, at Charleston, South Carolina.

Dunnellon Phosphate Company, Dunnellon, Florida.

Bartow Phosphate Company, Bartow, Florida.

A. N. Cross, of Tomah, Wisconsin, in Minnesota, Iowa and Nebraska.

Back Action drop-bottom excavator, designed and publicly used by Bernard R. Clutter and Herbert H. Wallower, at Joplin, Missouri, in the winter of 1919 and 1920, as shown by the depositions of Bernard R. Clutter, Phil Culbertson, W. L. Culbertson, John Cummings, M. A. Elsner, Lysle L. Hazen, Herbert H. Wallower, Frederick H. Ransom, taken and filed herein.

5. That the alleged invention and improvement described and claimed in said Letters Patent, No. 1,543,250, and all material and substantial parts thereof were publicly known to and used by the following persons at the places indicated prior to any invention thereof by the said Robert Rex Downie, and more than two years prior to the filing of an application for Letters Patent, as follows:

"Daniel H. Mahoney Machine" manufactured by Daniel H. Mahoney, of North Bend, Ohio, and used at Vincennes, Indiana, and vicinity, at Gorham, Illinois, at Knox County, Indiana, near West Phalia, Indiana, Edwardsport, Indiana, and elsewhere, as shown by the depositions of Daniel H. Mahoney, L. B. Reed, Frank J. Kapps, Frank A. Lang, Winn H. Reed, Robert E. Lind, William Stein, D. H. Bond, John W. Lenahan, Lyman Barekman, Ernest H. Vollmer, Thomas G. Dunn, Joseph Moschenrose, William Bradshaw, Henry Stone, George Stone, George DeRemo, Joseph Glenn, C. Crain, Eugene W. Johnson, taken and filed in this case.

A "Back Action" excavator which was manufactured and sold by The Vulcan Iron Works Company, at Toledo, Ohio, and which was publicly used by the Gillespie Company, of Pittsburgh, Pennsylvania, at Allegheny, Pennsylvania, Passaic, New Jersey, Ponton Plains, New Jersey, Minneapolis, Minnesota, by Anderson Bros., at St. Louis, Missouri, Farley & Green, at Chicago, and elsewhere in the United States, as shown by the depositions of John W. Webber and Walter S. Culver, taken and filed herein.

A Fairbanks Excavator manufactured and sold by the Fairbanks Steam Shovel Company, of Marion, Ohio, and publicly used by George A. Castle, at Crookeston, Minnesota, and by the San Benito Land & Water Company, or Rio Grande Construction Company, at San Benito, Texas, as shown by the deposition of William Mitchell, taken and filed therein.

A "Back Action" shovel manufactured and sold by the Marion Steam Shovel Company, at Marion, Ohio, and which was publicly used by the Charleston South Carolina Mining & Manufacturing Company, near Charleston, South Carolina, and at Bartow, Florida, as shown by the deposition of Frank H. King, taken and filed herein.

By a similar machine manufactured by the Marion Steam Shovel Company, of Marion, Ohio, and sold more than two years prior to the filing of the said Robert Rex Downie patent to the following Companies:

Charleston South Carolina Mining & Manufacturing Company, at Charleston, South Carolina.

Dunnellon Phosphate Company, Dunnellon, Florida.

Bartow Phosphate Company, Bartow, Florida.

A. N. Cross, of Tomah, Wisconsin, in Minnesota, Iowa and Nebraska.

Back Action drop-bottom excavator designed by Bernard R. Clutter and publicly used by him and Herbert H. Wallower, at Joplin, Missouri, in the winter of 1919 and 1920, as shown by the depositions of Bernard R. Clutter, Phil Culbertson, W. L. Culbertson, John Cummings, M. A. Elsner, Lysle L. Hazen, Herbert H. Wallower and Frederick H. Ransom, taken and filed herein.

LeRoy P. Clutter machine, manufactured and sold by Keystone Driller Company, more than two years prior to the filing of Robert Rex Downie patent No. 1,543,250, as shown by the depositions of George E. Wagner and of Bernard R. Clutter, taken and filed herein.

6. That the alleged invention and improvement described and claimed in said Letters Patent No. 1,716,432, and all material and substantial parts thereof were publicly known to and used by the following persons at the places indicated prior to any invention thereof by the said Robert Rex Downie, and more than two years prior to the filing of an application for Letters Patent, as follows:

PUBLIC USE.

Excavating Machines and Scoops manufactured and sold by Industrial Brown Hoist Company and The Brown Hoisting Machinery Company, of Cleveland, Ohio, more than two years prior to the filing of the said Robert Rex Downie patent No. 1,716,432, as shown by the depositions of William C. Bolgiano, J. M. Rice and George Fay, taken and filed herein.

7. That Robert Rex Downie was not the first inventor or discoverer of the invention alleged to be described and claimed in said Letters Patent No. 1,716,432, or any material or substantial part thereof, but that the same and all material or substantial parts thereof had been patented or described in patents filed prior to the date of the alleged invention of the said Robert Rex Downie; and that said patent is void and invalid because the alleged invention has been patented or described in printed publications prior to said Downie's supposed invention or discovery, or more than two years prior to his application for a patent therefor, as follows:

PUBLICATION.

Page 256, "Excavating Machinery," by A. B. McDaniel, published 1913 by McGraw-Hill Book Company, Inc., 239 West 39th Street, New York, N. Y.

8. That Robert Rex Downie was not the first inventor or discoverer of the invention alleged to be described and claimed in said Letters Patent No. 1,709,466, or any material or substantial part thereof, but that the same and all material or substantial parts thereof had been patented or described in patents filed prior to the date of the alleged invention of the said Robert Rex Downie; and that said patent is void and invalid because the alleged invention has been patented or described in printed publications prior to said Downie's supposed invention or discovery, or more than two years prior to his application for a patent therefor, as follows:

PUBLICATIONS.

Catalogue Copyrighted 1909 by American Hoist & Derrick Company, of St. Paul, Minnesota.

Engineering News and Contracting Magazine, dated October, 1924.

9. That the alleged invention and improvement described and claimed in said Letters Patent No. 1,709,466, and all material and substantial parts thereof were publicly known to and used by the following persons at the places indicated prior to any invention thereof by the said Robert Rex Downie, and more than two years prior to the filing of an application for Letters Patent, as follows:

> A Thew Automatic Shovel was manufactured and sold by The Thew Automatic Shovel Company, of Lorain, Ohio, and publicly used in the vicinity of Columbus, Ohio, by the Northwest Boulevard Company, more than two years prior to the filing of the said Downie patent No. 1,709,466, as shown by the depositions of W. E. Lawrence, Ben S. Thompson, Clarence Yardley, taken and filed herein.

Very truly yours,

EDWIN P. CORBETT,

Dated: January 30, 1931. *Attorney for Defendant.*

Service of a copy of the above-entitled Notice is hereby acknowledged this 31st day of January, 1931.

RICHEY & WATTS,

Attorneys for Plaintiff.

ORDER DISMISSING DEFENDANT'S MOTION TO COMPEL PRODUCTION AND INSPECTION OF DOCUMENTS.

(Entered Feb. 2, 1931, by Geo. P. Hahn, Judge.)

[Case No. 965]

This cause came on to be heard before this honorable Court the 3rd day of January, 1931, upon Defendant's motion to compel production and inspection of documents dated December 15, 1930, and the Court having considered the same upon the briefs and arguments of counsel for the parties.

It is hereby ordered, adjudged and decreed that the Defendant's motion to compel production and inspection of documents be dismissed without prejudice and the same is hereby dismissed without prejudice.

GEO. P. HAHN, *District Judge.*

Approved as to form by counsel for Defendants.

GEDDES, SCHMETTAU, WILLIAMS, EVERSMAN & MORGAN.
EDWARD H. REED—FRASER, HIETT, WALL & EFFLER.

Approved as to form by counsel for Plaintiff.

RICHEY & WATTS.

ORDER PERMITTING AMENDMENT TO DEFENDANT'S ANSWER TO BE FILED.

(Entered March 2, 1931, by Geo. P. Hahn, Judge.)

[Case No. 965]

It is hereby ordered that the attached amendments to defendant's answer to the original bill of complaint herein be entered and made a part of the original answer and that said amendments shall have the same force and effect as if they had formed a part of the answer as originally filed.

GEO. P. HAHN, *District Judge.*

We consent to the foregoing order.

Signed at Cleveland, Ohio, this 28th day of February, 1931.

RICHEY & WATTS,
Attorneys for Plaintiff.

Signed at Columbus, Ohio, this 24th day of February, 1931.

CORBETT & MAHONEY,
Attorneys for Defendant.

AMENDMENT TO ANSWER TO ORIGINAL BILL OF COMPLAINT.

(Filed Mar. 2, 1931.)

[Case No. 965]

Now comes the defendant, by its attorneys, with the approval of this Honorable Court, and amends its answer to the original bill of complaint as follows:

In paragraph VII (a) at the end of the list of prior United States Letters Patent enumerated on pages 3 and 4 of the Answer, insert the following list of patents:

UNITED STATES PATENTS

Patentee	*Number*	*Issued*
A. N. Cross,	418,311,	Dec. 31, 1889
A. N. Cross,	808,345,	Dec. 26, 1905
J. J. Benedick,	876,517,	Jan. 14, 1908
J. C. Boehm,	999,953,	Aug. 8, 1911
Geo. W. King,	579,589,	Mar. 30, 1897

At the end of the list of foreign patents at the end of paragraph VII (a) on page 4, insert the following foreign patents:

FOREIGN PATENTS

Great Britain,	H. Jubb,	No. 11,496, of 1903
Great Britain,	T. Whitaker,	No. 9,893, of 1899

At the end of the list of publications of paragraph VII (a), insert the following publication:

PUBLICATION

Pages 102, 103, 104, 130, 131, 132, 133, 157, 158, 159, 160 and 161, of "Excavating Machinery," by Allen Boyer McDaniel, Published 1913 by McGraw-Hill Book Company, Inc., 239 West 39th Street, New York, N. Y.

In paragraph VIII of said Answer, at the end of the prior uses listed on page 6, insert the following:

"Daniel H. Mahoney Machine" manufactured by Daniel H. Mahoney, of North Bend, Ohio, and used at Vincennes, Indiana, and vicinity, at Gorham, Illinois, at Knox County, Indiana, near West Phalia, Indiana, Edwardsport, Indiana, and elsewhere, as shown by the depositions of Daniel H. Mahoney, L. B. Reed, Frank J.

Kapps, Frank A. Lang, Winn H. Reed, Robert E. Lind, William Stein, D. H. Bond, John W. Lenahan, Lyman Barekman, Ernest H. Vollmer, Thomas G. Dunn, Joseph Moschenrose, William Bradshaw, Henry Stone, George Stone, George DeRemo, Joseph Glenn, C. Crain, Eugene W. Johnson, taken and filed in this case.

A "Back Action" excavator which was manufactured and sold by The Vulcan Iron Works Company, at Toledo, Ohio, and which was publicly used by the Gillespie Company, of Pittsburgh, Pennsylvania, at Allegheny, Pennsylvania, Passaic, New Jersey, Ponton Plains, New Jersey, Minneapolis, Minnesota, by Anderson Bros. at St. Louis, Missouri, Farley & Green, at Chicago, and elsewhere in the United States, as shown by the depositions of John W. Webber and Walter S. Culver, taken and filed herein.

A Fairbanks Excavator manufactured and sold by The Fairbanks Steam Shovel Company, of Marion, Ohio, and publicly used by George A. Castle, at Crookeston, Minnesota, and by the San Benito Land & Water Company or Rio Grande Construction Company, at San Benito, Texas, as shown by the deposition of William Mitchell, taken and filed herein.

A "Back Action" shovel manufactured and sold by the Marion Steam Shovel Company, of Marion, Ohio, and which was publicly used by the Charleston South Carolina Mining & Manufacturing Company, near Charleston, South Carolina, and at Bartow, Florida, as shown by the deposition of Frank H. King, taken and filed herein.

By a similar machine manufactured by the Marion Steam Shovel Company, Marion, Ohio, and sold, more than two years prior to filing of the said LeRoy P. Clutter patent, to the following Companies:

Charleston, South Carolina Mining and Manufacturing Company, at Charleston, South Carolina.

Dunnellon Phosphate Company, Dunnellon, Florida.

Bartow Phosphate Company, Bartow, Florida.

A. N. Cross, of Tomah, Wisconsin, in Minnesota, Iowa and Nebraska.

In paragraph XII (a) of said Answer, at the end of the list of United States prior patents listed on page 8 thereof, insert the following:

UNITED STATES PATENTS

Patentee	*Number*	*Issued*
P. Howard,	674,417,	May 21, 1901
F. E. Kersey,	881,695,	Mar. 10, 1908
A. W. Robinson,	1,047,991,	Dec. 24, 1912
L. P. Clutter,	1,107,899,	Aug. 18, 1914
G. E. Wagner, et al.,	1,476,121,	Dec. 4, 1923

In the same paragraph at the end of the foreign patents listed on page 8, insert the following:

FOREIGN PATENTS

Great Britain,	T. Whitaker,	No. 9,893, of 1899
Great Britain,	H. Jubb,	No. 11,496, of 1903
Great Britain,	P. W. D'Alton,	No. 655, of 1882

In the same paragraph at the end of the list of publications on page 8, insert the following:

Catalogue, Copyrighted 1909 by American Hoist & Derrick Company, of St. Paul, Minnesota.

In paragraph XIII of said Answer, at the end of the list of prior uses on page 10, insert the following:

"Daniel H. Mahoney Machine" manufactured by Daniel H. Mahoney, of North Bend, Ohio, and used at Vincennes, Indiana, and vicinity, at Gorham, Illinois, at Knox County, Indiana, near West Phalia, Indiana, Edwardsport, Indiana, and elsewhere, as shown by the depositions of Daniel H. Mahoney, L. B. Reed, Frank J. Kapps, Frank A. Lang, Winn H. Reed, Robert E. Lind, William Stein, D. H. Bond, John W. Lenahan, Lyman Barekman, Ernest H. Vollmer, Thomas G. Dunn, Joseph Moschenrose, William Bradshaw, Henry Stone, George Stone, George DeRemo, Joseph Glenn, C. Crain, Eugene W. Johnson, taken and filed in this case.

A "Back Action" excavator which was manufactured and sold by The Vulcan Iron Works Company, at Toledo, Ohio, and which was publicly used by the Gillespie Company, of Pittsburgh, Pennsylvania, at Allegheny, Pennsylvania, Passaic, New Jersey, Ponton Plains, New Jersey, Minneapolis, Minnesota, by Anderson Bros., at St. Louis, Missouri, Farley & Green, at Chicago, and elsewhere in the United States, as shown by the depositions of John W. Webber and Walter S. Culver, taken and filed herein.

A Fairbanks Excavator manufactured and sold by The Fairbanks Steam Shovel Company, of Marion, Ohio, and publicly used by George A. Castle, at Crookeston,

Minnesota, and by the San Benito Land & Water Company, or Rio Grande Construction Company, at San Benito, Texas, as shown by the deposition of William Mitchell, taken and filed herein.

A "Back Action" shovel manufactured and sold by the Marion Steam Shovel Company, of Marion, Ohio, and which was publicly used by the Charleston South Carolina Mining & Manufacturing Company, near Charleston, South Carolina, and at Bartow, Florida, as shown by the deposition of Frank H. King, taken and filed herein.

By a similar machine manufactured by the Marion Steam Shovel Company, of Marion, Ohio, and sold, more than two years prior to the filing of the said Robert Rex Downie patent to the following Companies:

Charleston, South Carolina Mining & Manufacturing Company, at Charleston, South Carolina.

Dunnellon Phosphate Company, Dunnellon, Florida.

Bartow Phosphate Company, Bartow, Florida.

A. N. Cross, of Tomah, Wisconsin, in Minnesota, Iowa and Nebraska.

Back Action drop-bottom excavator, designed and publicly used by Bernard R. Clutter and Herbert H. Wallower, at Joplin, Missouri, in the winter of 1919 and 1920, as shown by the depositions of Bernard R. Clutter, Phil Culbertson, W. L. Culbertson, John Cummings, M. A. Elsner, Lysle L. Hazen, Herbert H. Wallower, Frederick H. Ransom, taken and filed herein.

In paragraph XIX of said Answer, at the end of prior uses on page 13, insert the following:

"Daniel H. Mahoney Machine" manufactured by Daniel H. Mahoney, of North Bend, Ohio, and used at Vincennes, Indiana, and vicinity, at Gorham, Illinois, at Knox County, Indiana, near West Phalia, Indiana, Edwardsport, Indiana, and elsewhere, as shown by the depositions of Daniel H. Mahoney, L. B. Reed, Frank J. Kapps, Frank A. Lang, Winn H. Reed, Robert E. Lind, William Stein, D. H. Bond, John W. Lenahan, Lyman Barekman, Ernest H. Vollmer, Thomas G. Dunn, Joseph Moschenrose, William Bradshaw, Henry Stone, George Stone, George DeRemo, Joseph Glenn, C. Crain, Eugene W. Johnson, taken and filed in this case.

A "Back Action" excavator which was manufactured and sold by The Vulcan Iron Works Company, at

Toledo, Ohio, and which was publicly used by the Gillespie Company, of Pittsburgh, Pennsylvania, at Allegheny, Pennsylvania, Passaic, New Jersey, Ponton Plains, New Jersey, Minneapolis, Minnesota, by Anderson Bros., at St. Louis, Missouri, Farley & Green, at Chicago, and elsewhere in the United States, as shown by the depositions of John W. Webber and Walter S. Culver, taken and filed herein.

A Fairbanks excavator manufactured and sold by the Fairbanks Steam Shovel Company, of Marion, Ohio, and publicly used by George A. Castle, at Crookeston, Minnesota, and by the San Benito Land & Water Company, or Rio Grande Construction Company, at San Benito, Texas, as shown by the deposition of William Mitchell, taken and filed therein.

A "Back Action" shovel manufactured and sold by the Marion Steam Shovel Company, at Marion, Ohio, and which was publicly used by the Charleston South Carolina Mining & Manufacturing Company, near Charleston, South Carolina, and at Bartow, Florida, as shown by the deposition of Frank H. King, taken and filed herein.

By a similar machine manufactured by the Marion Steam Shovel Company, of Marion, Ohio, and sold more than two years prior to the filing of the said Robert Rex Downie patent to the following Companies:

Charleston South Carolina Mining & Manufacturing Company, at Charleston, South Carolina.

Dunnellon Phosphate Company, Dunnellon, Florida.

A. N. Cross, of Tomah, Wisconsin, in Minnesota, Iowa and Nebraska.

Back Action drop-bottom excavator designed by Bernard R. Clutter and publicly used by him and Herbert H. Wallower, at Joplin, Missouri, in the winter of 1919 and 1920, as shown by the depositions of Bernard R. Clutter, Phil Culbertson, W. L. Culbertson, John Cummings, M. A. Elsner, Lysle L. Hazen, Herbert H. Wallower and Frederick H. Ransom, taken and filed herein.

LeRoy P. Clutter machine, manufactured and sold by Keystone Driller Company, more than two years prior to the filing of Robert Rex Downie patent No. 1,543,250, as shown by the depositions of George E. Wagner and of Bernard R. Clutter, taken and filed herein.

THE OSGOOD COMPANY,
By CORBETT & MAHONEY,
Attorneys.

ORDER PERMITTING AMENDMENT TO BE MADE TO DEFENDANT'S ANSWER TO SUPPLEMENTAL BILL OF COMPLAINT.

(Entered March 2, 1931, by Geo. P. Hahn, Judge.)

[Case No. 965]

It is hereby ordered that the attached amendments to defendant's answer to the supplemental bill of complaint herein be entered and made a part of the original answer to the supplemental bill of complaint and that said amendments shall have the same force and effect as if they had formed a part of the answer to the supplemental bill of complaint as originally filed.

GEO. P. HAHN,
District Judge.

We consent to the foregoing order.

Signed at Cleveland, Ohio, this 28 day of February, 1931.

RICHEY & WATTS,
Attorneys for Plaintiff.

Signed at Columbus, Ohio, this 24 day of February, 1931.

CORBETT & MAHONEY,
Attorneys for Defendant.

AMENDMENT TO ANSWER TO SUPPLEMENTAL BILL OF COMPLAINT.

(Filed Mar. 2, 1931.)

[Case No. 965]

In Paragraph VII (a) of said Answer to the supplemental bill of complaint, at the end of the list of prior patents on page 4 thereof, insert the following publications:

PUBLICATIONS

Catalogue Copyrighted 1909 by American Hoist & Derrick Company, of St. Paul, Minnesota.

Engineering News and Contracting Magazine, dated October, 1924.

In paragraph VIII of said Answer to the supplemental bill of complaint, at the end of the prior uses on page 6 thereof, insert the following:

A Thew Automatic Shovel was manufactured and sold by The Thew Automatic Shovel Company, of Lorain, Ohio, and publicly used in the vicinity of Columbus, Ohio, by the Northwest Boulevard Company, more than two years prior to the filing of the said Downie patent No. 1,709,466, as shown by the depositions of W. E. Lawrence, Ben S. Thompson, Clarence Yardley, taken and filed herein.

In paragraph XII (a) of said Answer to the supplemental bill of complaint, at the end of the list of prior patents listed on page 8, insert the following:

PUBLICATION

Page 256, "Excavating Machinery," by A. B. McDaniel, published 1913 by McGraw-Hill Book Company, Inc., 239 West 39th Street, New York, N. Y.

In paragraph XIII of said Answer to supplemental bill of complaint, after line 8 thereof on page 9, insert the following:

PUBLIC USE

Excavating Machines and Scoops manufactured and sold by Industrial Brown Hoist Company and The Brown Hoisting Machinery Company, of Cleveland, Ohio, more than two years prior to the filing of the said Robert Rex Downie patent No. 1,716,432, as shown by the depositions of William C. Bolgiano, J. M. Rice and George Fay, taken and filed herein.

THE OSGOOD COMPANY,

By CORBETT & MAHONEY,
Attorneys.

ORDER CONSOLIDATING CAUSE NUMBER 965 WITH CAUSE NUMBER 964 FOR THE PURPOSE OF TRIAL.

(Entered Mar. 3, 1931, by George P. Hahn, Judge.)

[Case No. 965]

It is hereby ordered that the above entitled suit shall be tried and heard by this court together with the suit of Keystone Driller Company, Plaintiff vs. The Osgood Company, Defendant, Equity No. 965; that testimony taken at the hearing by the plaintiff or either of the Defendants be used in each case with the same force and effect as though the witnesses were examined separately in each of said cases, provided however that, at the trial, the witnesses may be examined or cross-examined by the Attorney for either defendant on behalf of the other defendant; or the Attorney for each defendant may examine and cross-examine the witnesses separately if they so desire; that objections and exceptions made by counsel in either case apply with equal force and effect in both cases; that any and all exhibits introduced in evidence by any of the parties hereto and/or any test or inspection or examination of any machine or apparatus proffered at hearing by any party hereto be considered by the Court with the same force and effect in both cases (insofar as they may apply to both cases) as though such exhibit were introduced, and such test, inspection or examination were made separately in each of said cases; that if the Court desires arguments and/or briefs after the trial the former be made and the latter filed in the two cases together, but the defendants to have the right to file separate briefs. Plaintiff waives its objection heretofore made to the taking in both cases together of the depositions hitherto taken; that a separate copy of any and all paper exhibits shall be filed in each case, provided that when the original of any of said exhibits is filed in one case, a photographic or other copy of said original exhibit may be filed in the other case subject to comparison with the original and correction if any error or discrepancy be found; that the Plaintiff provide each of the Defendants with a copy of its record and that separate records shall be made and filed in each case, and that separate decrees be entered in each case; and that nothing herein shall deprive the parties to said suits of any material rights or defenses to which they would be entitled if these cases were tried separately.

O.K. Edward L. Reed, *Counsel for Defendant.*

Richey & Watts, *Counsel for Plaintiff.*

STIPULATION RE DEPOSITIONS OF JOHN B. WEBBER, WALTER S. CULVER AND FRANK H. KING.

(Filed March 3, 1931.)

[Case No. 965]

It is hereby stipulated by and between the parties hereto that the depositions of John B. Webber, Walter S. Culver of Toledo, Ohio, and Frank H. King of Marion, Ohio, taken on behalf of the defendant herein and any and all exhibits offered in evidence in connection with said depositions may be offered and received in evidence in the above-entitled case under U. S. Revised Statutes, Sections 863, 864 and 865, with the same force and effect as though the said witnesses were at the time of trial herein residing more than one hundred (100) miles from the place of trial thereof.

RICHEY & WATTS,

Dated March 3, 1931. *Counsel for Plaintiff.*

CORBETT & MAHONEY,

Dated March .., 1931. *Counsel for Defendant.*

STIPULATION RE DEPOSITION OF WILLIAM MITCHELL.

(Filed Mar. 4, 1931.)

[Case No. 965]

It is hereby stipulated by and between the parties hereto that the deposition of William Mitchell of Marion, Ohio, taken on behalf of the defendant herein and any and all exhibits offered in evidence in connection with said deposition may be offered and received in evidence in the above-entitled case under U. S. Revised Statutes, Sections 863, 864 and 865, with the same force and effect as though the said witness was at the time of trial herein residing more than one hundred (100) miles from the place of trial thereof.

RICHEY & WATTS,

Dated March 4, 1931. *Counsel for Plaintiff.*

CORBETT & MAHONEY,

Dated March 4, 1931. *Counsel for Defendant.*

ORDER PERMITTING TAKING OF DEPOSITIONS AT SOUTH MILWAUKEE, WISCONSIN.

(Entered April 17, 1931, by Geo. P. Hahn, Judge.)

[Case No. 965]

Upon motion of the defendant for an order permitting it to take the depositions of the following persons for use at the trial of the above entitled case, to-wit:

William Bager,	South Milwaukee, Wisconsin
Werner Lehman,	South Milwaukee, Wisconsin
H. O. Jacobson,	South Milwaukee, Wisconsin
D. P. Eells,	South Milwaukee, Wisconsin
C. A. Kelly,	South Milwaukee, Wisconsin
Andrew Vahldieck,	South Milwaukee, Wisconsin
N. A. McGrath,	South Milwaukee, Wisconsin
Noel S. Hayward,	South Milwaukee, Wisconsin
J. H. Imse,	South Milwaukee, Wisconsin
M. T. Smith,	South Milwaukee, Wisconsin

and it appearing to the Court, by affidavit, that the persons above named are beyond the jurisdiction of the Court, living more than one hundred miles from the place of trial herein, and it appearing that the evidence sought to be elicited from such persons is newly discovered and that consequently their depositions could not have been taken before, plaintiff's motion is granted and leave to take said depositions is hereby given.

GEO. P. HAHN, *Judge.*

STIPULATION AS TO THE CORRECTNESS OF THE NARRATIVE STATEMENT OF TESTIMONY.

(Filed Sept. 26, 1931.)

[Case No. 964]

It is hereby stipulated and agreed by and between Counsel for the parties in the above-entitled cause that the annexed Narrative Statement of Testimony as amended by stipulation of Counsel is a true, complete statement of the evidence adduced at the trial of the above cause reduced to narrative form, and that where portions of the testimony herein is set forth in the form of question and answer, it is so set forth that the evidence might be clearly understood, and it is desired by the parties that the exact language of the witnesses be so stated, and the Court is requested to so approve.

RICHEY & WATTS,

September 25, 1931. *Attorneys for Plaintiff.*

EDWARD L. REED,

September 25, 1931. *Attorney for Defendant.*

STIPULATION AS TO THE CORRECTNESS OF THE NARRATIVE STATEMENT OF TESTIMONY.

(Filed Sept. 26, 1931.)

[Case No. 965]

It is hereby stipulated and agreed by and between Counsel for the parties in the above-entitled cause that the annexed Narrative Statement of Testimony as amended by stipulation of Counsel is a true, complete statement of the evidence adduced at the trial of the above cause reduced to narrative form, and that where portions of the testimony herein is set forth in the form of question and answer, it is so set forth that the evidence might be clearly understood, and it is desired by the parties that the exact language of the witnesses be so stated, and the Court is requested to so approve.

RICHEY & WATTS,

September 25, 1931. *Attorneys for Plaintiff.*

CORBETT & MAHONEY,

September 25, 1931. *Attorneys for Defendant.*

ORDER APPROVING NARRATIVE.

(Entered Sept. 26, 1931, by Geo. P. Hahn, Judge.)

[Case No. 964]

The Narrative Statement of Testimony taken at the trial of this cause having been presented to the Court, and being found by the Court to be a true, complete and properly prepared copy,

IT IS THEREFORE ORDERED, that the same be settled and allowed as a true, complete, and correct statement of the evidence introduced in said cause, reduced to narrative form, and that where portions of the testimony herein is set forth in the form of question and answer it is so set forth that the evidence might be clearly understood, and as the parties so desire that the exact language of the witnesses may be so stated, the Court so permits and approves.

GEO. P. HAHN,
United States District Judge.

Dated: September 26, 1931.

PRINTER'S NOTE:

An Order Approving Narrative, exactly similar to the foregoing, was entered by Geo. P. Hahn, Judge, on Sept. 26, 1931, in Case No. 965.

The same has been omitted to avoid duplication.

NARRATIVE STATEMENT OF EVIDENCE UNDER EQUITY RULE 75.

(Filed Sept. 26, 1931.)

[Cases Nos. 964 and 965]

Be it remembered that on the trial of the above-entitled cause, the District Court of the United States, Northern District of Ohio, Western Division, at Toledo, before Honorable George P. Hahn, one of the Judges of said Court, the following proceedings were had:

Trial commenced Tuesday, 10:00 A.M., March 3, 1931.

Appearances: F. O. Richey, Esq. and A. H. Edgerton, Esq. of Messrs. Richey and Watts, Cleveland, Ohio, Charles R. May, Esq. of Beaver Falls, Pa., and Philip E. Siggers, Esq. of Washington, D. C., for Plaintiff. Edwin P. Corbett, Esq. and John J. Mahoney, Esq. of Messrs. Corbett and Mahoney, Columbus, Ohio, and Lloyd T. Williams, Esq. of Messrs. Williams, Eversman and Morgan, Toledo, Ohio, for Defendant, The Osgood Company. Edward L. Reed, Esq. of Dayton, Ohio, for Defendant, The General Excavator Company.

By an Order of Court assented to by the above Plaintiff and Defendants, it was directed that the above-entitled suits should be tried and heard together, and that the evidence offered by the Plaintiff or either of the Defendants be used in each case with the same force and effect as though it had been offered separately in each of said cases.

As to the claims of the patents in suit, Mr. Richey stated that the Plaintiff would rely upon claim 4 of Clutter patent 1,317,431 against both Defendants. He stated that as to the first Downie patent 1,511,114 the Plaintiff would rely on claims 6 to 14 inclusive against both Defendants. As to the second Downie patent 1,543,250 he stated that the Plaintiff would rely on claims 1 to 6, and 9 and 10 against both Defendants. He said as to the third Downie patent 1,709,466 that Plaintiff would rely on claims 1, 2, 8, 10, 11, 12, 13, 15 and 19 against both Defendants. He stated as to the fourth Downie patent 1,716,432 the Plaintiff was only charging infringement against the Defendant, The General Excavator Company, and would rely on claims 1, 14, 16 and 18.

Mr. Richey stated that Title had been stipulated, with the exception that the Osgood Company had re-

fused to stipulate that the Plaintiff owns the right to collect for past infringements of the patents, and so he would put in assignments for that purpose. He stated that there had also been an agreement as to the character of the machines that the Defendants had made and sold, and that they are illustrated in catalogues from which they had made cuts.

Opening statements of the case were thereupon made by Counsel for the respective parties.

(Noon Recess)

(1:30 P. M., same day, hearing resumed)

After the noon recess the opening statements of Counsel were continued, by Mr. Corbett, Mr. Williams, Mr. Reed and Mr. Richey.

PLAINTIFF'S CASE.

Mr. Edgerton: If the Court please, at this time we introduce on behalf of the Plaintiff the following exhibits:

P-1	Clutter patent No. 1,317,431.
P-2	Downie patent No. 1,511,114.
P-3	Downie patent No. 1,543,250.
P-4	Downie patent No. 1,709,466.
P-5	Downie patent No. 1,716,432.
P-6	Stipulation dated February 25, 1931.
P-7	Certified copy of the decree of the Keystone Driller Co. vs. Day & Maddock Co., Equity 3617, Jan. 23, 1931, Cleveland Docket.
P-8	Certified copy of decree of Keystone Driller Co. vs. Thew Shovel. No. 3616—Cleveland, Ohio.
P-9	Keystone Driller Co. vs. Byers Machine Co., certified copy of decree. Equity No. 2084, Cleveland Docket.
P-10	Certified copy of decree Keystone vs. Bay City Shovel Inc. Equity No. 205, Eastern District of Michigan, Northern Division.
P-11	Assignments of patents in suit to Keystone Driller Co.
P-12	Volume 1 of record Byers vs. Keystone. Equity No. 2084.

P-12-1 Volume 2 of record Byers vs. Keystone. Equity No. 2084.

P-12-2 Envelope containing exhibits in Byers Case, Equity No. 2084.

Mr. Corbett: As to some of these exhibits introduced in evidence we would like to preserve any possible objection until we have had a chance to examine them.

The Court: Very well.

Rex R. Downie, a witness called by plaintiff, being first duly sworn, testified as follows:

Direct Examination by Mr. Richey.

My name is Rex R. Downie. I reside at Beaver Falls, Pa. I am the inventor of the devices shown in the four patents in suit. I am an officer of the plaintiff company. I was employed intermittently from 1914 to 1920 by the plaintiff in this case, as mechanic, field man, and continuously from November 1919 to date by plaintiff. At first, as I say, as a mechanic in the shop; later as field mechanic and demonstrator; and then as a draughtsman, inter-mixed with administration work; and since 1921 I have been in charge of the engineering for plaintiff, though not an engineer professionally. I am a college graduate, and secretary and general manager of plaintiff company. Ditching has been our principal line of business for this period of which I speak, since 1914; for the past twelve years my work has been primarily the excavation of trenches. In the course of my duties I have examined very many of these machines during operation, in all parts of the United States east of Denver. Not only plaintiff's machines but a dozen or more makes of others; and all various sizes and types of scoops; various kinds of power; and various kinds of mountings; and I think on nearly all varieties of work that are done.

I testified as an expert in the case of the plaintiff herein versus The Byers Machinery Co., in Cleveland. I have examined the drawings and read the descriptive part of the specifications of the patents in suit and understand the machines illustrated and described in the drawings and in the descriptive part of the specifications.

(The witness using a model of the Clutter machine, and a big drawing of the Clutter patent, thereupon gave

the following explanation of the construction and operation of the Clutter patent.)

The Clutter patent is the first patent in suit, the first in point of time, and in scope. In this patent there is the boom and what is called the stick, ditcher stick; a scoop-carrying member; a scoop pivotally attached at the foot of the stick; a pair of braces pivotally attached at the digging end of the scoop, and carrying at their upper extremity slidably mounted in a guide-way upon the stick the pin, being normally restrained from falling by a releasable latch; a hoisting line for elevating the entire structure; the hoisting line being connected to the head end of the stick by links; and connected also to the boom is a pair of links, No. 7 in the patent. This structure at the head of the stick—

The Court: Which one.

Witness: Has been frequently referred to as the pantagraph structure.

The Court: Which one are you referring to?

Witness: This (indicating).

The Court: You call that the stick.

Witness: This is the stick.

The Court: That is the link up there?

Witness: These are links, and these are links; but a brief term which Judge Westenhaver used for reference to this structure, as distinct from a structure wherein there are no vertical links, but only links connecting the hoisting line to the head of the stick, and only for such purpose of such distinction.

The chief characteristic and utility, or at least the utility which indicates the class of the Clutter machine, is that it stands upon the solid ground in advance of its work and excavates by a digging stroke originating at the extreme outreach and extending in an upwardly-extending arc toward the handling machine; thus calling for and permitting the handling machine located upon the uppermost bounding plane of the material to be excavated. The location of the machine upon the top bounding plane permits the use of the machine for excavating trenches of a width too small to accommodate an entire excavating machine, and thereby distinguished Clutter from certain machines in the art which are referred to as ditchers, but which should not be confounded with Clutter, and which dig by means of a downwardly and upwardly extending arc such as Cross, and others of the type. It thus brought the power of this size and

class of machine to be deliverable upon the material in a trench two feet wide, which was a notable advance.

A characteristic of Clutter which was not promptly accorded its due importance at the time of the coming of Clutter, but which since has acquired definite standing as a principle in earth excavation, is that he attained with but two power members what other machines had required three power members to perform.

The Court: You mean he could not operate with two hands?

Witness: The majority of machines; any of the machines having even a majority of Clutter's functions, were not operable by means of two cables anywhere in the prior art of either the Cleveland suit or this suit. In performing his functions by means of but two cables, the hoisting line 21 of the patent, and the hauling line 23, Clutter brought within that simple, dual power application a great range of functions and utilities; the most remarkable, in some ways, being that to strike a hammer-like blow, something which no one prior to Clutter had done; and which extended the digging ability of his device for his size, power and class into the excavating of matters which, without his hammer blow, required weight and power from twice his weight and power to three times his weight and power.

The blow of which I speak is commonly referred to in briefs and in the record in this case as the gravity blow. It is struck by extending the scoop to such a point that it is aimed downwardly, and quickly releasing the hoisting line in this manner (thrice indicating). The second and sharpening element in the operation to produce the gravity blow is a quick retracting of the hauling line at the instant before the teeth strike the ground,—which I will now illustrate (illustrates repeatedly).

Of course the material so fractured—and the blow was and is used for fracturing material rather than actually shaving it or parting it entirely by tooth knife action—in other words it is a pounding action in its effectiveness for breaking rock—had to be gathered and is gathered by the scoop proper as a concave hoe might be used for handling earth.

Further qualities residing in the structure are that the scoop can be moved in any one of the four primary directions of excavation in the center plane of operation with the two members referred to: upwardly by the hoisting line; downwardly by the release of that line; in-

wardly by the retraction of the hauling line; outwardly by the slacking of the hauling line; or in any combined or derived direction within the four points of movement and at any instant in the digging cycle,—a remarkable advance over such machines as two or more of the Rood patents, and others. This selection vested in the operator permits what is called by the operators "pawing," as alluding to the way in which a horse paws the ground with his hoof. It permits the accurate placing of the scoop over a wagon as for discharge, the scoop being moved in or out after the swing has been effected to accommodate or come to the position required for discharge.

The device has also what we term 180-degree travel, that is, a travel of sufficient angular extent to include vertically downward, horizontal and vertically upward presentations of the scoop. The importance of this will be seen from the need for excavating downwardly both for striking the blow—since gravity can only be used in the vertical—and for sinking an excavation in the new, that is, to get down to the level desired at the bottom plane of excavation; horizontally, for the major duty of dirt moving; and vertically in the terminal stage of the digging stroke. The 180-degree travel also implies another form of discharge, or rather one, a simple or basic form of discharge, that of inversion, a method limited in its utility to work wherein a progressive discharge, that is, the gradual sliding of the material out of the scoop in its progress from mid-reach to full reach, is not objectionable. In other words, to work, as we say, where ground deposit is made, and not in such work as requires the conveyances or the accurate placing of the spoil.

Independent presentation is a quality possessed in this Clutter structure distinguishing from much of the prior devices, that is, that the scoop, having taken its load, having been elevated, swung about, discharged and returning to its work, is restored to a digging position with reference to its other parts before it reaches the ground, and is therefore in no degree dependent upon contact with the work either for applying its power or for the attainment of position of the scoop or any part; therefore, the Clutter scoop returns to the work after discharge ready to strike a gravity blow without first touching the ground for restoration of the parts, and then being elevated, as would be required lacking this quality.

The Clutter device was designed for and did execute expeditiously the excavation of trenches at what we call the single width, that is, trench work wherein each digging passage of the scoop follows exactly the centerline preceding and succeeding digging passages. The scoop in its passage, clearing itself sufficiently, with partial retractions of the scoop could be made in the course of digging as when a root or boulder is struck,—the operation which I have referred to as pawing is executed down in a trench, and even with the relatively weak back-thrusting or retracting force available in this device. It will be understood that the hauling force toward the machine is very powerful; but that the backward force is only equal to a fraction of the digging and hauling power, being derived from the short arm at the head end of the stick.

The Clutter scoop is placeable at a radius from its center of rotation elective with the operator, in distinction from several of the machines that had been in use theretofore, both on an outward and inward arc, as I have said, adjusted to the vehicle, if vehicles were used for the conveyance of spoil. The material is discharged by the action of gravity. This was at once a result and a cause of two-power-line operation.

Many of these things are interwoven in a way difficult to present all of the merits independently, and yet each in its fullness; but if a gravity discharge had not been obtained, a third line would have been required for the discharging of the scoop, since in commercial sizes the weight of the load in this type of machine is considerably beyond that which can be lifted by a workman. Mr. Clutter obtained only a partially or moderately satisfactory control of discharge, that is, ability to control the scoop while discharging into a conveyance.

Regarding power lines I will now explain how they are operated and distinguish between power lines and other kinds of lines that are used. There are other tasks in the operation of a machine than the mere hoisting of the apparatus or the hauling of the scoop toward the machine. First there is what we call swinging, the application of power required to revolve the boom and its supporting structure about some vertical axis, which may be either located at the base of the boom as in the case of this model, and as was the case in plaintiff's commercial machine offered from 1913 to the present time, and still offered as an optional model; or which may be located at the mid-point of a revolving turntable or cab,

as in the type of machine commonly called the whirling or revolving machine.

Another function which is to be performed in a machine, but which does not take artificial power, but for which artificial power may be used, or for which the hand exertion may be used, is that of tripping the bucket, in such work as requires what may be termed spot discharge, that is, a discharge wherein the entire load is to be deposited in a relatively confining area, as distinguished from the progressive discharge, to which I have referred previously, and as required when loading the conveyance.

There are, then, in Clutter two power requirements for effecting all motions of the scoop in the central plane of operation, and as required in the work of making the material loose, gathering it, elevating it, and adjusting the scoop to the desired in and out position for discharge. Those are the hoisting line and the hauling line, and those only are employed up to that point in the cycle. And then the swing power is required in the one other direction for lateral revolving. Discharge is then effected by some discharging line or instrumentality, and swing power is applied in the opposite direction, and again the two major operating lines continue the cycle.

This Clutter machine was manufactured and sold by the plaintiff company. When the Clutter invention was first brought to the plaintiff company, this company was employed in the manufacture of deep well and shallow well drilling machines, and deep well pumps; that is for the drilling of water wells, gas and oil wells, blast holes and the like; and Mr. Clutter came to our company first with the idea of buying the traction mechanism, boiler and engine for handling certain new scoops which he had lately invented:—this, in 1912. Our company became interested in that, and instead of entering an arrangement for merely furnishing parts, took hold of the development of Mr. Clutter's machine. We paid Mr. Clutter for this ditching machine invention and the Clutter patents between $125,000 and $150,000, in licenses and in outright purchase of Mr. Clutter's patent, that is, of the ditcher. And we spent more money in whipping it into commercial form.

I now produce a catalogue of the plaintiff showing the Clutter machine in connection with its commercial history.

Mr. Richey: I offer that in evidence as plaintiff's exhibit P-13, Keystone Bulletin 901, October, 1919.

(Narrative continued.) I would like to mention the record of the sales of the Clutter ditcher as indicating the growth. I am reading from a memorandum prepared for that purpose. In 1914, of the Clutter ditcher, the plaintiff made and sold—

Mr. Corbett: If I may interrupt, as to these questions about value, we do not think they are of the utmost importance, but it does not seem to us that the best evidence is being presented here about the amount of money paid for these machines. It seems as though the plaintiff, if they were going to prove how much was paid, they ought to show what the nature of the agreement was, if it was a licensed agreement, how much was paid on each machine, how many machines were manufactured and sold.

The Court: Suppose you wait until cross examination on that, and see if you are satisfied.

Mr. Corbett: All right. And the books—is he speaking just from the notes there?

The Court: Witnesses in this type of cases usually have the data prepared from the books. You might cross examine him about the memorandum and see if you are satisfied.

Mr. Corbett: It seems as though the books ought to be here.

The Court: Cross examine him about the memorandum.

Mr. Richey: It goes to the commercial success. The exact amount of machines does not make any difference. We are patent lawyers.

Mr. Corbett: Patent lawyers sometimes contract the rules. If we are going to have evidence of the value of these machines, we ought to have the best evidence. That rule still prevails even though we are patent lawyers.

The Court: I agree with you; but I suggest you cross examine him. You may be satisfied on cross examination.

Mr. Williams: Should not that cross examination be had now before he testifies?

The Court: I suggested that.

Mr. Richey: There is no jury here. You know whether it is competent or not. It goes to the commercial success.

The Court: That is not the objection. The objection is that this witness has a summary here, undoubtedly made up from the books of account, or something of that kind. Ordinarily, before a witness can testify from a summary of that kind, the books have got to be in court so that opposing counsel may cross examine him.

CROSS EXAMINATION by Mr. Corbett.

Q. Who made these records from which you are testifying? A. R. F. Patterson, engineer, and Mr. F. B. Ransome, assistant sales manager.

Q. Is he here? A. Mr. Ransome is now located in Joplin, Missouri.

Q. And the other man? A. Mr. Patterson is here.

Q. Is he here in court? A. He is here.

Q. Has he the books with him? A. He has not the books with him. This is Clutter's sales report made in 1926 prior to the hearing by Judge Westenhaver.

Q. Does Mr. Patterson keep these books from which these records were made? A. These records were made from the sales records. He does not preserve the sales records.

Q. It is not a question of preservation—whether he actually kept the books; did he keep the books from which these records were made? A. No, sir, he did not.

The Court: Are those books still in existence? A. They are in our plant.

Q. Will you produce the books before you close the case? A. If it is material in this matter, I am secretary of the company.

Q. I think it is material we should have an opportunity to inspect them.

Witness: These books are very cumbersome, of course, and they are used in our regular doing of business; but they can be transplanted, cabinet and all, if it is necessary.

Q. Then as I have got the situation, you are testifying now from a memorandum made by Mr. Patterson, who did not keep the books? A. And by the assistant sales manager, whose business it was to accept orders and enter the orders.

Q. This assistant sales manager didn't keep the books, either, did he? A. He entered the orders.

Q. Let me ask you another question. Was this $125,000.00 that you have testified to, or $150,000.00,—was that as the result of a license agreement? A. In part.

Q. Have you got the license agreement? A. I do not have it here.

Q. Can you produce, and will you produce it? A. I can produce it,—

Mr. Richey: I don't think it is necessary to produce it.

A. (continuing)—or I think it could be brought. I would have to direct some one else to produce it.

Q. Was it on a royalty basis? A. On a royalty basis, yes, sir.

Q. And finally this question: That is only for the ditcher attachment? A. Only for the ditcher. There was another $150,000.00 paid for the skimmer.

Q. And you had some trouble, didn't you, with Mr. Clutter about the payment of this? A. Might be regarded as trouble. It was before I was directly in the management.

Mr. Corbett: I don't want to extend this examination, Your Honor, but I just want to get this record to show these facts.

The Court: It seems to me that you are not interested in these other records unless you are denying that the plaintiff has title to this patent.

Mr. Corbett: No, Your Honor, but he is trying to show the value of these patents by second best evidence.

The Court: I don't think that can be accepted,—no difference what somebody paid for it. Is that your claim, Mr. Richey?

Mr. Richey: No, Your Honor, this goes to the commercial success.

The Court: Well, what you paid for it before you put it on the market isn't any evidence of commercial success.

Mr. Richey: Well, it goes to the value of the invention.

The Court: Well, that is what you thought it was worth at that time.

Mr. Richey: Yes, sir.

Mr. Corbett: He is trying to prove the value of the invention by the money paid for it, is the point.

Mr. Richey: We are trying to show that the man knowing all those matters should know the value of those things, and ask the court to accept that rather than what some patent lawyers say about it; that is the purpose of the testimony.

Mr. Corbett: We admit that the plaintiff may have paid $125,000 or $150,000. It frequently occurs that they pay it, and pay it mistakenly, and we think they ought to confine themselves to the best evidence. We notice in the Cleveland case there was assertion after assertion made, without any foundation in fact, and we are going to show some of those, and we would like to confine this record to the facts.

Mr. Richey: Well, my position is that he is Secretary of the company, and we have gotten in these big companies where you can't call the man who put down the entry any more, but you have to call somebody who has had charge over those things.

The Court: That is so, but then the books should be there, and there are limitations as to that. Now this witness personally doesn't know anything more about it than I do, apparently.

Mr. Richey: Well, it isn't so important that those figures are exactly correct.

The Court: No.

Mr. Richey: He knows that they are about correct; he knows they sold about so many machines the first year and so many the second year.

The Court: If he knows that without the books, of course he should testify that way.

Mr. Corbett: All he knows is from hearsay.

The Court: He hasn't qualified on his own statement here to testify on the subject.

Mr. Richey: Well, technically, Your Honor, I admit that is right.

The Court: Well, they are making the objection.

Mr. Richey: Yes. Of course, I can appreciate Mr. Williams' position. He tries those kinds of cases. But in these patent cases we often take short cuts about these matters.

Mr. Williams: Not only is it hearsay, but it is third-hand hearsay, by somebody who don't know anything about it himself. In other words, he is testifying from a statement made by a salesman.

The Court: I have taken the same objection.

By Mr. Richey:

Q. Well, Mr. Downie, tell them independently of any comments on anything else, about the history and the sales of this Clutter machine, about how many were sold. You don't have to say any exact figure, but from year to

year, about what they were. A. I was familiar with that, and saw the machines leaving the plant, demonstrated the machines with the customers, and therefore have rather an accurate idea as to how many were sold from having seen the machines leave.

By Mr. Corbett:

Q. Isn't it a matter of fact that between 1914 and 1920 you were only intermittently employed by the Keystone Company? A. That is true.

Q. What do you mean by intermittently,—that you were employed there only in the Summer vacation? A. That is right.

Mr. Corbett: He has testified to the whole year, and he was employed at that plant only in the Summer vacation, Your Honor.

Witness: I haven't said I was employed at the plant during the whole year.

Mr. Corbett: How could he know, then, Your Honor?

The Court: Well, I don't know whether he does or not,—if you ask me how he knows.

Mr. Corbett: We would like to have the records, and then we could check the matter.

Mr. Richey: I think I will ask to have the answer taken, if the Court will permit me, no matter what the view is of the pertinency of it, because, as I say, that is the kind of testimony we put in on those things. It isn't like trying to prove an account.

The Court: If this witness says he knows, you will have to take the testimony, and then test it by cross examination, that is all, and find out whether there is any foundation for his belief that he knows.

A. The Sales of the Clutter ditcher in 1914 were five, approximately. In 1915 they amounted to between 15 and 20; in 1916, from 30 to 50; 1917, from 70 to 75, or perhaps 100; and by 1920 amounted to over 150, totaling in the period, including 1914 and 1920, something over 600 devices. That is the commercial rise accorded by the trade to this device.

By Mr. Richey:

Q. Now, will you look at the catalogue which I hand you and state whether or not that is a catalogue of the commercial Clutter machine?

The Court: Has that been marked as an exhibit?

Mr. Richey: This is P-13.

A. From plaintiff's Exhibit P-13, entitled Keystone Traction Steam Shovel Model 3, a catalogue of the plaintiff company issued in October, 1919, and identified as Bulletin 901, I make the following references: This machine illustrates the model of handling machine made by plaintiff in the period from 1913 up to the present,—machine of the type called a non-revolving shovel or excavator, Model 3. It handles a complement of scoops, including the skimmer scoop as shown on the first page of the bulletin; also the scoop shown on page 5 of the bulletin.

The Court: This is before the Downie patents, is it?

Witness: Before the Clutter patent.

The Court: Before the Clutter patent.

Witness: Before the Clutter ditcher invention and scoop was made. The scoop on page 5 of the bulletin is of the outward arc type.

By Mr. Richey:

Q. Well, will you limit your discussion to the ditching machine shown there? A. All right, sir.

(Narrative continued.) On page 7 there is the ditcher device of the patent, a photograph made of one of the first of these Clutter ditchers, and in which as one of the incidents of development, the links extending from the housing sheave to the upper end of the stick were found, upon field use, to contact at an intermediate point of their length with the upward forward corner of the extension members of the boom, limiting in this manner the inward sweep of the scoop, and detracting a little from that sweep. This contact of which I speak occurred on the first ditcher scoop as used at Conway in 1914. This limited the movement of the stick toward the boom, except for the bending of the link, which is what in fact occurred. The bending of the link, of course, removed the limitation in the movement of the scoop, so that in fact it was merely a slight distortion of the parts or links extending from the housing sheave to the head of the stick. Views as shown on the second page of the catalogue indicate the revised form of the link, for the link was revised immediately upon, or in regular course after the contact had been discovered.

This is a view of one of the very early machines, showing the connecting links slightly curved at an intermediate portion of their length, instead of straight as the links in the Clutter model here are. The contact

occurs here in the Clutter model, since the model was made to follow the patent, even more definitely in that one detail than the commercial machine. That was one of the faults of the original Clutter at the time.

The Court: Is this before the patent was issued, or after, Mr. Richey?

Q. What is the answer to that? A. Before the patent was issued.

Mr. Richey: Just one of those details,—incidental things that happen,—that show the difference between the drawings and the commercial machine.

(Narrative continued.) I saw the Clutter machine in operation and also operated them during the period between 1914 and 1920. I saw them operated in a great range of material, from sand and loam to very stiff shale, and relatively harder materials, including slag from blast furnaces, which is frequently encountered in the Pittsburgh district. I worked on a job in Woodlawn in the Summer of 1915 digging slag for a number of new houses being built by the Jones-Laughlin Steel Company, which was in part dug without blasting, but in part required blasting operation. The difficulty there in blasting was that when working adjacent to buildings already in place there was, of course, objection to the force and noise of blasting work. This argued digging the material with the machine, with the maximum of its capacity.

Q. Now, this Clutter machine at all times had the fault of inaccuracy in discharge and difficulty of getting clay out, didn't it? A. It had, from the first.

The Court: Well, this is also before the patent was issued?

Witness: Yes, sir.

The Court: All right.

(Narrative continued.) The Clutter patent was issued in September, 1919, I believe. The application was filed in February, 1915. The commercial use arose from April, 1914, principally to 1920, and as a subordinate device since that date.

Regarding the two defects in the machine, the defect of which I first spoke was promptly remedied upon discovery; that is, the defect of the connecting links touching upon the outer end of the extension irons. This was a draftsman's error in laying out and providing for the motions of the device. Whether that was remedied on the first machine or the second or the fifth, I couldn't

say, but it was remedied very promptly. I have talked to the operator who operated the first machine, and from whom I learned that the bars bent as soon as strained slightly by the contact. The other defect of which you spoke was not a trifle of drafting, but was inherent in the Clutter organization with all of its merits and utilities. It resulted from the use of the hauling line for the double function of revolving the bucket into its closed position and also revolving the stick inwardly. That combination of functions of the one power member was necessary to avoid recourse to an additional power member, and still having or retaining fixed presentation for the striking of the gravity blow and a presentation independent of the work; that is to say, Mr. Clutter could have attached his hauling line to the base of the stick and rested his scoop upon the ground and allowed ground pressure and the weight of the device to revolve his scoop into closure, but would have thereby sacrificed independence of presentation and would have had to go through that operation in order to strike a blow, or to dig any other material. The trouble did lead, as has been said here, to breakage of wagons, the spillage of material, and to rendering more difficult than it would otherwise have been the acquiring of the skill necessary to operate the machine.

As to efforts that were made to get away from these known defects in the Clutter machine, I know that the troubles of the spillage and the wagon breakage were widely known. I do not know of all the efforts, but I know of two made at the Beaver Falls plant, beginning in 1919, and in demonstrating the machine I had one idea in mind for remedying it, and the ditcher was made relocating the pivot of the scoop at a more central point of the scoop. This eventuated in the Wagner et al. patent. We then made another one to further minimize or remedy the wobbling action of the Clutter scoop in time of discharge, before the drop bottom patent here in suit was evolved. This difficulty was universally known wherever the ditcher was used, and the company were making efforts toward a solution of it before that period.

Q. Now, here are some photographs of the Clutter machine which I have marked P-14. They were in the Byers case. Just point out to the Court, if you will, what was the cause of bending that link there? A. Referring to Plaintiff's Exhibit P-14, this is a series of photographs showing the first Clutter ditcher, operating at Conway, Pennsylvania, in April or May, 1914.

Mr. Corbett: We object to this evidence.

Mr. Richey: If you dispute that point, it may go out about the date, because he don't know that of his own knowledge.

Mr. Corbett: Yes. We want that proved by people who know.

Mr. Richey: Yes, you are entitled to that.

(Narrative continued.) In the device here shown, the links, to which I have referred previously, are slightly curved. This curve has resulted from the contact of the intermediate point on the under edge of the link with the upper and outer corner of the boom extension irons, the links not having been so curved at original manufacture, but as a result of operation, as when, assuming the machine to be in the position of the third in the series of photographs, the scoop would be pulled by the operator further toward the boom, or sufficiently further to bring the link down into contact with the boom extremity. This was the result of the interference which has been referred to.

The inaccurate dumping and inability to discharge clay and material in the Clutter machine was overcome by the drop bottom ditcher, as developed in 1920 or '21; that is, the first Downie patent in this case. I will now take up and explain the structure of the machine of the first Downie patent, its operations, its advantages and I will use the second model here to demonstrate them.

The Court: I guess this is a good place to stop.

Mr. Richey: I offer this Clutter model in evidence as Plaintiff's Exhibit P-15.

(Adjourned to 9:30 A. M., Wednesday, March 4, 1931.)

(9:30 A. M., Wednesday, March 4, 1931.)

(Hearing resumed.)

DIRECT EXAMINATION of REX R. DOWNIE by Mr. Richey continued.

(Narrative continued). This is the first Downie patent in suit No. 1,511,114. In this machine there is a boom 2 in the patent, a ditcher stick No. 11—

The Court: Well, the first Downie patent covers some improvements on the scoop, doesn't it?

Witness: Yes, sir, and the entire combination. There is a scoop extension and also the stick, and then the assembly.

The Court: All right; go ahead, then.

(Narrative continued). A scoop No. 23, attached beneath the lower end of the ditcher stick 11 by means of suspension members 19, and with bracing means between the feet of the stick members 22 with braces 20 extending from the rear end of the scoop to an intermediate point in the length of the ditcher stick; a pivoted bottom 25 carried by the scoop body and mounted for angular movement of sufficient extent to permit the use of momentum closure; a hauling bail 40 attached to the sides of the scoop for connecting therewith the hauling line 43; a latch mechanism carried upon the end wall of the scoop to an interengaging part on the bottom for securing the bottom in closed position, retaining it in closed position throughout the digging cycle and all of the digging functions of this machine, and made so as to be releasable at the will of the operator or a special tag man.

There is at the head of the stick a linkage connecting the head of the stick with the hoisting line; these parts are numbered 16 in the patent, and in this form are curved. There is the hoisting cable 18 analogous to the hoisting cable of the Clutter machine, No. 21 in the Clutter. A part not numbered, but entering the assembly, is a sheave carried upon the boom at an intermediate point in its length as a guide for the hauling line. There is as one of the distinctions between this device and Clutter a long bearing employed for the pivoting of the stick upon the outer end of the boom; these bearings are numbered 7 in the patent.

There are teeth secured to the side walls of the scoop outside of the cutting plane or of the edges of the cutting plane of the bottom, No. 27, which extend forward over and protect the bottom pivot bolts 28 with sufficient flare and the flare located at such a point as to cut clearance both for the upper region of the scoop as required for leaning the device towards one side or the other in the trench for modifying the generally downward direction of progress of the excav tion, and to preserve a clearance for the rear portion of the scoop such as to permit the scoop to be operated in its alignment in a horizontal plane from its previous stroke in order to modify the generally forward direction of excavation. That completes the explanation of the parts of the patent.

I will now explain the model of this machine and the operation and advantages of it. This machine operates in the same field as the Clutter machine, with corresponding functions and certain additional functions. All of the operation is below the grade or the bounding plane of excavation, upper bounding plane of excavation, except for the one sporadic duty of back-filling trench. I might mention that more particularly, since it has come to Clutter and the drop bottom ditcher. The spoil from the trench when deposited upon the ground, and after the laying of pipe, desired to be backfilled, with both Clutter and the drop bottom ditcher, the handling machine is placed upon the opposite side of the trench from the spoil pile, and the machine, the ditcher, is extended across the open trench and used to haul or slide the loose material into the open trench. It is permitted, of course, because the open excavation intervenes between the machine and the scoop, but except for this all of the work of the two machines is down below grade. There is the same two-line control reserved, the hoisting line and the hauling line. The same auxiliary or incidental functions are to be performed in this machine as in Clutter, the tripping of the scoop, the side swinging to the left and to the right. The same striking of a gravity blow is performed by the drop bottom machine. There is in the construction of the stick an overhead bail of the scoop, and the mode of attachment of the stick and the scoop structure directed toward perfecting this utility and toward the attainment of an added utility, that of undercutting the walls of the trench. I might illustrate this by lowering the scoop to a point below and as though into an already begun trench, as by applying swing pressure to the housing line or to the boom, swinging it to one side the stick is caused to lean toward the one side, that is, toward the side to which the boom is swung. Now as the scoop is drawn towards the machine it will excavate, not in a vertical line as when unrestrained, or as when the stick is vertical, but in a sloping line toward the side, or rather toward the opposite side from that toward which the stick leans. This is, of course, highly useful for avoiding obstructions which either cannot be excavated, as boulders protruding into the desired excavation, true line of excavation, or in avoiding things such as curbs along streets which are desired to be undisturbed. In performing this work it is necessary that the scoop should travel along a line or in a plane parallel with the general plane of excavation, and in spite of the engaging capacity and tendency of the side

rake teeth, the scoop must not be allowed to be revolved out of its digging plane; that is, if pressure is caused against the right hand bank, the structure must be such as to prevent the scoop from being revolved so as to be pointed or cocked toward the right hand bank. This involves the structure connecting the stick to the scoop especially, and the stick itself, as well as the bearing at the upper end of the stick for preserving the alignment of the stick and the boom.

For the practice of this function in greatest extent and where demanded most definitely, a boom with some tortional resiliency is needed. It will be noted that in the model here the boom may be twisted a matter of 30 degrees out of its alignment as between the forward end and the rear end, without permanent distortion. In the commercial machine this is also true, as of the model as made up to this time, and one of the models offered by plaintiff.

The elective movement as possessed in the Clutter machine is carried forward in this as based upon the same utilization of two power members for the four primary movements which vest in the operator this election. The 180 degree travel with its various utilities, simple discharge and contributor to gravity blow, vertical sinking of excavation, discharge of spoil at maximum outreach, are preserved in this construction.

Independent presentation, a closure effect in mid-air, not requiring contact with the work, is also obtained in this construction by what is called momentum closure of the bottom. The bottom is pivoted freely to the side walls of the scoop at a low point, and as far toward the digging end as possible, and, as stated in the patent, secured by means of an automatically engaging latch at the rear end of the bottom. This momentum closure is explained in the patent and consists, assuming the bottom be hanging vertically open, in a releasing movement of the hauling line causing outward movement of the scoop, a sudden arresting of that movement, as performable by the model, although in faster time, of course, than would be true in the commercial machine, and this closure, it should be explained, is augmented in its commercial use by a coordination in the manipulation of the hoisting line. As the hauling line passes out and the scoop rapidly moves outward from the boom, and the hauling line is restrained, and as the bottom begins its movement up toward the scoop, its attainment of the closed position is considerably augmented, or hastened,

by the sharp and short release of the hoisting line, dropping the scoop four or five inches. This adds to the force available for swinging the bottom in case the material is extremely muddy and tends to choke the bottom pivots, or whether due to severe digging conditions, and of course the pivots being unlubricated, and if material is such as to enter the pivots and tend to set up excessive friction, then of course the coordinated operation of the hoisting line is employed to make the closure more reliable.

This machine operates at single width, that is, excavating a trench of a width equal to the extreme transverse dimension of the scoop, as accomplished by the Clutter machine, and very usually for the same purposes, although carrying that single width excavation into substantially harder materials than was possible or is now possible in the Clutter machine.

The use of this in harder materials than the field entered by Clutter comes about from a new utility in the use of a pivoted bottom upon this inward arc 2-line controlled machine. This utility in the field we call rooting. The material dug by this ditcher is, of course, attacked in the first instance or part of the stroke at a very obtuse angle; that is, as when the scoop is presented almost at 90 degrees to the material; then is drawn through a decreasing angle into the horizontal, and then upwardly along a curve or sloping face of the work, and particularly in that quadrant of the scoop traveled wherein the scoop is pointed downwardly, that is, in the quadrant lying beyond that position indicated by the vertical position of the stick, the material is excavated into a trough form which of course will match the figure described by an outline of the tooth points; that is, it will dig to the shape of the cutting edge of the scoop as viewed horizontally. This, of course, is when the nose of the scoop is made so as to protrude substantially beyond the side rake teeth and troughed, and the material is excavated to that form. If, assuming such a trough, the bottom is released, the form of the cutting edge is deformed, the entire weight of the scoop, stick and a due portion of the weight of the boom is allowed to rest upon the side rake teeth alone, and the digging power itself, that is, hauling line power, is applied to the uprooting or excavating of the material lying in the path of the side rake teeth. Thus the scoop is drawn through the material with a greatly multiplied engagement forcing pres-

sure upon the side rake teeth, and a multiplied hauling power to effect excavation is produced by the increased engagement power.

The Court: When do you use the machine in that posture there?

Witness: In excavating materials too hard to dig by the ordinary process of excavation. That is, we run into materials which we are not able to dig in the normal way, and rather than blast the material or dig it out by some other means—and blasting is not the only way to get it—we use this rooting operation, employing the two parts of the tooth complement, both operating outward; that is, hard pan or shale, and things of that kind. There are some clays which are very stiff, but ordinarily they can all be dug by the ordinary digging process, unless there is mixed in small boulders of some kind which tend to roll the scoop about. In that case the rooting process is used.

Now, after the scoop has been hauled through the material on the rooting stroke, in which stroke of course no material is gathered, the bottom hanging or dragging open along the face, and the uprooted or fractured material merely passing over the bottom, after this stroke the scoop is lifted to clear and the bottom closed. Then the scoop is again drawn through the material, and it will be noted that since the side rake teeth have excavated the material lying immediately in their plane, that is, the plane adjacent, the region adjacent the wall, that then all of the weight or engagement forcing power of the machine is now concentrated upon the bottom teeth, the side rake teeth being in mid-air, and all of the digging power of the machine, horizontal digging force, is applied to the carrying through of such engagement as is effected. The method is extremely effective, and, as I say, extends somewhat the hardness capacity of the machine. I should say that frequently two or three passes may be required to complete the rooting cycle; that is, to carry the excavation to its original trough form wherein the side rake teeth can begin to engage, and at which point the bottom is again tripped and the fractured and gathered material is carried out of the trench —the bottom is again tripped and the side rooting or corner rooting work again effected.

This function was, of course, unattainable to Clutter because of his use of an integral scoop, and is of course not employed in any of the end dump scoops or any of

the drop bottom scoops employed in the skimmer field, because none of them have this outer quadrant or presentation in which the scoop is presented at a sharp angle to the ground, and as required for getting the correct presentation of the teeth; and of course, none of the skimmers or any such scoops ever employed these functionally equivalent side cutter teeth, so located as to root or tip their scoops in such a way as to root them if they had been so toothed. As I say, it is employed mostly in single width excavation, where a peculiar limitation is, as I believe I have mentioned previously, that the scoop is closely held to its first line or path of travel, and can not, so to speak, play back and forth over a space of excavation, as can a skimmer and the forward arc and drag line, or any other form of scoop employed upon a broader than single width of unit face of earth.

This coincident in the digging strokes results in hard material in making it necessary that a greater engagement forcing capacity is needed than is needed in a broad face of excavation, and renders the more critical the matter and the more difficult the matter of forcing the engagement, and hence of more value this extension of hardness ability which I have just described—rooting.

This machine as the Clutter machine, as stated in the Clutter patent, is attachable to any suitable handling machine having the requisite power of drums and mechanism for locomotion, and of course, the requisite stability, and this of course extends both in the side range and as to the kinds of country through which the machine can be operated,—its utility. The machine is used by plaintiff on two forms, chiefly, of handling machines, the one a revolving structure, and the other a type wherein only the boom revolves laterally, somewhat as this model does, and wherein the body of the handling machine remains stationary in the swinging operation. The utilities, however, of the ditcher are independent of the matter of the handling machine; that is, as between the two principal types of swing mechanism, and of course is independent of such constructions as the mounting, whether the handling machine be mounted upon wheels or upon crawlers. There has been a very great, almost universal, trend from wheel mountings to crawler mountings in recent years, and of course the utility does not depend upon any particular form or kind of motive power. Formerly all these machines were steam driven, and at that time Clutter and this machine were carried into the

field upon steam actuated devices; but now, almost universally, gasoline is used for the driving power. Occasionally electric power is used, but the effect, of course, is the same. It may be stated as a general proposition for the extending of the utility of the device, that is, independent of the kind of power, independent of the kind of mounting, independent of the kind of swinging mechanism employed for its support and actuation and relocation. Does that cover it?

Q. Now, have you named all the advantages of this machine? A. No.

Q. Will you continue? A. Yes, sir. The discharge of the material by gravity was, as I stated previously, important to Clutter, since it helped him to avoid the otherwise necessity of a third power line, and that feature of Clutter is carried forward and preserved in this machine. The releasing mechanism may be of such a relatively light structure and light duty as to bring it within the capacity of muscular actuation, and the load is not, of course, listed during the releasing operation, hence there is nothing but friction to overcome.

The bottom pivots, as I have said, of course are placed with reference to this matter of gravity discharge in order to preserve that feature, and also with reference to the closure employed, and since we have been employing it in the more recent years of the career of this machine with reference to the rooting function, the deformation of the cutting edge for the purpose of concentration alternately upon the bottom and side regions.

The further down and the further forward the bottom pivots are located, the greater, of course, is the unbalanced weight of the scoop, and the greater the exertion of the load toward prompt full discharge, the bottom and load being moved, of course, only by the unbalanced, and not by the entire, weight of the scoop.

In this machine there is what may be termed progressive breakage of the adhesion of the load to the scoop, which was the first step toward overcoming one of the defects of Clutter, which we explained previously; that is, with the unbalanced weight of the load and bottom, upon release of the latch, exerting a force or momentum tending to revolve the bottom downwardly at its rear end, that force is first exerted exclusively toward breaking the adhesion of the load to the interior surfaces of the scoop, the two side walls and the end wall of the

scoop, and there is in the first phase of the discharge operation no movement of the load of material upon the bottom, either sidewise or longitudinally. This use of the discharge force first for effecting one part of the task of adhesion breakage is the reason for the immediate and full success of this type of scoop in the discharge of those materials which rendered Clutter of limited acceptance. After the bottom has fallen a short distance and the adhesions of the material to the interior surfaces of the scoop, the interior vertical surfaces of the scoop, have been broken, and as the bottom falls on down, the adhesion of the material to the bottom is then broken by the load. In extremely sticky materials this load usually slides off the bottom, but in the event that it is so sticky as to adhere to it merely as a surface, even hanging between the vertical and the 45 degree slope, the bottom may be swung back and forth and the force tending to separate the material from the bottom greatly increased by the swinging action and the centrifugal force exerted upon the load. It is relatively seldom that an entire load will cling to the bottom so tenaciously as this, but frequently considerable cakes of material will do so—cakes of material, accretions built up.

As mentioned, this is an advantage not attainable in our Clutter machine. It was recognized as entering the scoop discharge difficulty, but of course regarded as inevitable that a below grade integral scoop—a below grade cutting at single width should be an integral scoop, and therefore that simultaneous breaking of the adhesions of the load to the walls just had to be put up with.

Another feature of the Clutter machine which has been remarked previously, is that of the lack of control of the operator over the motions of the scoop while discharging. You will recall that the Clutter hauling lines attached to one end of the scoop, and that as the scoop revolved to discharge its load, it, so to speak, yanks upon the hauling line, thus in effect jerking the stick and the scoop machinewardly with some violence. This had the effect of kicking the load out of the scoop and made it necessary for the operator to spot his scoop beyond the wagon far enough that allowing for such horizontal kicking as he thought the material, size of scoop, weight of load, etc., would produce, would land the material in the wagon, and far enough above the wagon that with the reasonable expectable effect of dip, the sideboards would not be knocked off the wagon by the teeth. It re-

quired great expertness to land the material in the wagon without injuring the wagon with Clutter, and it was the trial of operators. It did not prevent Clutter from functioning with passable success, even where conveyances are required, and of course it was no disadvantage to him where ground deposit was made, and the court will note that the unstability of the Clutter scoop in the discharge phase is closely involved with this matter of the breaking of adhesions to the walls of the scoop, because in the event of incomplete breakage of adhesions, a part of the load being retained in the scoop, if the operator sought to dislodge the remainder of the spoil by jerking upon his hauling line, he did exactly the opposite of that which would be required to complete the discharge; that is, the effort was ineffectual because the jerk which might loosen the adhering remnant of the load also revolved the scoop slightly towards its closed position and thus prevented the run-out of material which might have been caused if the scoop—or might have been caused to remain stable when the snapping action or jerking should be applied.

Now, when we came to the construction of this machine, and the thing which led to the invention of this machine, was the perception that it was inevitable that Clutter's prime utility of two-power member control, with his use of the integral scoop his performance, and the hauling line secondary function of scoop closure through and ahead of its primary function, that of hauling the stick and scoop towards the machine—it was inevitable that at discharge there should be this yanking that I spoke of on the hauling line, and that therefore there should be the machineward kick of the scoop and stick. In Wagner, et al. patents, and in another machine made between Wagner and the drop bottom, we shortened up that distance from the hauling line connection to the scoop, to the pivot of the scoop to the stick, on the theory and with the object of diminishing or mitigating this machineward kick of the scoop at discharge. This was the prompting object, and the effort, of course, being to at once retain Clutter's prized advantage of bringing all functions within the two lines and control of the operator's two hands, but still escaping the scattering of material and the damage to conveyances resulting from this instability produced by the falling of the load leaving the scoop, and further, as set up or caused, if the operator should try by yanking upon either of his two

cables to loosen any adhering remnant of the load. Therefore when we came to this machine of the patent now under discussion, the first and beginning point was an attachment of the hauling line to a scoop which is always stable with reference to the stick in the digging phases and in the discharge phases, the forces being great or slight. And of course this lent the device the characteristic which it now has and which of course has caused its displacement of the actual mechanism made by Mr. Clutter, and the American market; this stability in discharge, with the facile discharge as permitted by the progressive breakage of adhesions, stability of the scoop when yanked for completion of discharge of any adhering materials.

I have here photographs marked "Plaintiff's Exhibit P-16" showing a machine similar to the model operating in rocky soil. The plaintiff's Exhibit 16 illustrates work down in this region in which one of our earlier machines of the type of this patent is employed for excavating shale and rocky soil. The machine is shown in the first view just beginning the digging stroke; in the second view, discharging over the spoil pile by the method which I have called ground deposits, or simple discharge; and in the third view is beginning a digging stroke. In two of these views, the smoke caused by the pressure of the teeth upon the material is apparent. I have seen, of course, many such jobs in the field, and all of the features of the views appear there to be in the normal course of operation of Keystone employed in relatively wide sewer work.

Mr. Richey: I offer the four photographs in evidence as Plaintiff's Exhibit P-16; and the second model which the witness has been discussing I offer in evidence as Plaintiff's Exhibit P-17.

(Narrative continued) The machine of the first Downie patent was manufactured and placed upon the market by our company in the year 1921. This catalogue which is marked "Plaintiff's Exhibit P-18" is the catalogue of the company showing this machine. The catalogue was issued in January, 1921, showing the machine of the patent under discussion. We continued to manufacture and sell the type of machine shown in that catalogue of January, 1921, with revisions, of course, over three and four year periods, of improvements for strength and capacity—we are manufacturing it today as our standard ditcher.

The Exhibit P-18 is the catalogue which I have referred to as having been issued in January, 1921, being bulletin 903, first edition, and as showing the ditcher as used in experimental work in 1920 and as carried into commercial use in 1921, the ditcher being of the type of the patent under discussion. Views showing this machine are to be found on the inside of the flyleaf of the book, that is, page 2 unnumbered; on page 12, in which view the ditcher stick construction, boom, linkage and cables are shown in phantom, on pages 26, 27, 28, 29, 30, 31, with a diagram on page 37. The position of the machine as seen on page 27 shows the approach to the work, either for the striking of a blow, as has been explained, or for the beginning of excavation, although in this view excavation has been already begun. The views upon pages 28 and 29 illustrate two successive stages in the operation of discharging into a conveyance, the scoop being first, as on page 28, brought over the spot at which the load is desired to be placed, the bottom being then tripped as indicated by the bottom line in the view, the scoop being then lifted away from the load, and the load tumbling into the conveyance. From this phase, of course, the scoop is lifted further and swung about, and the bottom closed, as might be illustrated by the view on page 30. On page 31 the machine is performing the operation to which I have referred as the one sporadic use of the Clutter, and this ditcher, for above grade material handling—not a true digging function, but the handling rather of loose material, that is, backfilling in an open trench.

This machine was manufactured by our company for a matter of two years or more before we incorporated the improvement of the second Downie patent 1,543,250. We had what we have referred to here as a blind spot in our operation of the machine; that is at elevations above the ordinary, or low elevation for dumping, we encountered a position in which the hoisting lines' direction of pull either intersected or came so near to intersecting or being intersected by the stick pivot that a relatively feeble outthrusting force was exerted upon the scoop, and causing restriction of our discharge area, or, at extreme elevation, preventing our having a zone or range of discharge, and the effect of this intersecting of which I spoke being that it caused the scoop to click against the boom in such a way that it could not be swung out until the boom had been lowered. This, of course,

tended to restrict the use of the machine for those larger trenches wherein the spoil pile may be very high, and calling for a device capable of discharging at relatively greater elevations or for excavating where the conveyances may be placed upon a slight elevation with reference to the supporting plane or grade of the machine, and thus make necessary the positioning, spotting and discharge of the scoop at higher than normal elevation. The immediate and obvious solution of merely lengthening the upper arm of the ditcher stick was not in our judgment and experience desirable and permissible for the satisfaction of the condition which I have described; that is, the attainment of a reasonably effective in and out positioning range at extreme elevations. The reason for this prohibition in our judgment as the pioneers of the device and users was that such increase in the length of the upper arm for the purpose of preventing the intersection of which I have spoken would increase that antagonism which exists between the hauling line and the hoisting line, and which opposition or antagonism, while in itself objectionable, causing an irregular movement in the device, is nevertheless indispensable to it and to be highly prized because it permits the securing of the outer quadrant of digging travel without a third power line, and it has to be kept at a minimum because of its power weightage potentiality and its tendency to misdirect the application of force; that is, I mean by that, that if the hoisting line is held perfectly stationary and the scoop is hauled toward the machine by the hauling line, there is an elevation occurs in the entire device, and so I refer to the lever scoop or antagonism of the lines as being misdirective to the hauling line effort, not delivering all of the hauling line power applied to the pure exertion of the teeth, but allowing a part of it to go over into the hoisting effort and likewise that in the use of the hoisting line, as for uprooting an obstacle, some effort must be exerted upon the hauling line in order to maintain the engagement of the device with the obstacle, otherwise the scoop will lift away from the obstacle and uprooting effort cannot be exerted. This is a wastage of power, except for permitting the machine to operate with but two lines, and is the antagonism to which I referred. We normally operate by retaining both of our lines upon clutches suited for instantaneous reversal of direction on mere reduction or application of full power. We of course

noticed and are very much aware of the wastage which results, and operators are aware that if they secure such an engagement upon straighter sloping in such a way that they do not happen to need hauling line effort in order to uproot, the uprooting effort is considerably more effective.

Referring to photographs marked "Plaintiff's Exhibit P-19" and also referring to the second Downie patent 1,543,250, I will now explain the structure, its operation and result and use these photographs to aid in the description of this patent.

In the patent referred to there are links 15 corresponding to similar links in earlier patent, and abutments 23 which inter-engage with suitable surfaces upon the ditcher stick bearing 19. In this patent also the stick and the scoop are the same, otherwise than as I have indicated, as in the earlier Downie patent.

The Court: Well, the only purpose of that patent was to avoid the blind spot, was it not?

Witness: Yes, sir. The machine as illustrated in Fig. 1 of the patent shows the abutments engaging and the scoop at approximately the outermost point of its range at that elevation. In the photographs P-19, the first view illustrates the machine at extreme elevation and with the abutments removed for the purpose of illustrating the result of not using them, and with the hauling line removed to indicate and illustrate that the position of the scoop is entirely under the control of gravity, and not modified by hauling up line.

The Court: In other words, when it is in that position there would be the blind spot?

Witness: Precisely.

The Court: All right.

Witness: Now, then, in view 4 the elevation of the boom is the same, and all conditions are the same except that the machine has been elevated to this position with the abutments in place.

The Court: So as to avoid the blind spot?

Witness: So as to avoid the blind spot, and producing the four feet and a half of additional spotting range obtained by the employment of the abutments. That, I believe, completes the explanation of the patent, and the interpretation of the photographs.

The Court: In other words, you avoid the blind spot by not permitting the scoop to ever get into the position which is shown on P-19 first?

Witness: That is correct, sir.

The Court: All right.

Mr. Richey: I offer these photographs in evidence as Plaintiff's Exhibit P-19.

The Court: All right, you may have them.

(Narrative continued). The machine as modified and embodying the improvements of the second Downie patent was manufactured commercially, as shown in the catalogue which was just handed me, marked "Plaintiff's Exhibit P-20."

Mr. Richey: I offer this catalogue in evidence as Plaintiff's Exhibit P-20.

The Court: I am assuming that all of these Exhibits will be admitted. There has been no objection except that Mr. Corbett has reserved an objection to certain ones, and expects to make a statement on that later. That is, he may have some objection, and may not.

Mr. Richey: All right, sir.

(Narrative continued). I will now take up the third Downie patent No. 1,709,466, and explain its construction, operation and advantages. In this patent, the principal item of novelty is in the attachment of the stick and scoop in such a way as to make various widths or sizes of scoop usable alternately, an economical structure, one not requiring skill for installation of alternative scoops, and especially one in which under the severe stresses of excavating, and especially the striking of blows, will not cause or permit play to set up as between the scoop and the stick. For this purpose connecting elements, bolts 6, are placed so that with the tightening of the bolt all play is eliminated initially, and in such a way that if either with rusting, or with any over-stressing of the bolt, or in any other way, if play should develop, the elimination of it requires only the tightening of the bolt; the structure is, of course, so shaped as to withstand the downward forces in the stick as when the weight of the boom and stick are allowed to ride the stick in forcing the engagement, the overhead bail or part 25, a composite structure being generally bridge-shaped, and of course equally effective for resisting lifting force, whether by impact or in the slow process of digging. The only elements required to be removed for changing from one scoop to another

in the field are the bolts 28—I believe I previously referred to them by the numeral 6; that was an error, being apparently a sectional view guide—and the bolt at the rear of the scoop 32. The latch and releasing mechanism comes apart at the extremity of the lever on the rear of the scoop as is indicated by the drawing.

The merit of the device and of the machine is realized from its adoption in 1925, wherein elimination of play which had occurred in this earlier construction, wherein the more natural or at least usual form of attachment of buckets and sticks is employed, that is, where bolts are employed subjected to shearing for joining the stick base to the overhead bail.

The commercial machine shown in this catalogue, Plaintiff's Exhibit 21, embodies these improvements.

Mr. Richey: I offer that in evidence as Plaintiff's Exhibit P-21.

(Narrative continued). The structure itself in the Exhibit referred to shows in one view, called the 1927 coal scoop, the overhead bail like that shown in the patent, and wherein bolts are employed for securing the foot of the stick to the bail. There is another view in which the bolt head can be seen more clearly, this view to which I now refer being almost a direct side view of the scoop.

One function or advantage of the upstanding channel flanges as built from two angles is that the foot of the stick is gripped against displacement, as implied by twisting of the scoop with reference to the stick, and as would be developed and tended to develop when this process of undercutting was employed; that is, the cocking of the scoop towards one side. By the use of these flanges as an element in the mounting, and with the draw bolt between the flanges for firmly clamping the foot of the stick, the attachment bolts joining the stick and scoop are entirely relieved of this function of maintaining the scoop against side twisting, and the foot of the stick is carried as in a vise-like grip. I believe that completes the explanation of that.

I will now take up the fourth Downie patent 1,716,432, and by referring to the drawings and descriptive part of the specification explain its structure and operation, and will use Plaintiff's Exhibit P-21 in this description. This patent relates to side cutter teeth or side rake teeth,

as commercially termed, the chief departure from previous practice is that instead of employing a side rake tooth shaped only for excavating material in the vertical plane, a form of greater penetrative capacity is evolved. There is a point 19 of the side rake tooth which is in a leading position with reference to the upper structure; there is an edge 21 for the side shearing function performed in the side rake tooth of the previous structure, the principle of operation being that the point 19 penetrates and disrupts material lying in the path of the edge of the scoop, and that the shearing edge 21 then separates that material lying in the path of excavation from that lying outside of it, and the surfaces, such as 24 and 22 and 19, are so arranged as to, with the minimum of power and in the shortest horizontal travel possible, gather the material into the open mouth of the scoop. The importance of the matter comes from the peculiar duty of ditcher scoops as compared with skimmers and outward arc machines and the like, in that the single width cutting dirt scoop has to get all of the material lying ahead of it, and cannot force any material outside of it laterally, and this results in the rather severe lateral compacting of the material at entry, and therefore warrants specialized tooth structure and body structure for the minimizing or escape of this lateral compacting and for the economy of power. The tooth as shown in the first Downie patent was employed for many years, and in an effort to secure downward digging, durability and effectiveness in the teeth as first employed, the lower extremities of the side rake teeth were sharpened, to cut out the shoulder which developed in the harder materials, but the use of the merely sharpened edge is of only temporary advantage because the edge wears off and the tooth becomes a sled runner and tends to prevent the most effective penetration, either by the slow digging process or by the rooting method. And of course when we then formed the teeth of the patent under discussion, we expected to enhance still further the utility of the rooting method of operation as well as the slow digging method. The tooth was effective, was immediately adopted, and has remained in use since that time, and is the plaintiff's present commercial form.

Q. Yesterday you brought the commercial history of the inventions involved in this patent up until, I think, the beginning of 1921; that is, up through the Clutter era? A. Yes, sir.

Q. Will you begin where you left off and state in a general way the commercial history of the machine of the patent since then, telling us as near as you know of your own knowledge and remember the numbers that have been sold year by year.

Mr. Corbett: Your Honor, we object to that own knowledge of his. We ought to have the records here.

The Court: Well, he has a right to tell what he knows.

Mr. Corbett: We except to that.

The Court: Go ahead.

A. The drop bottom ditcher scoop as shown in the first Downie patent was standardized, that is, made standard with plaintiff, at the beginning of 1921; as I have said, the experimentation with it and development of it having occurred in 1920; and was immediately successful because, of course, of its—

The Court: Mr. Richey asked you about numbers,—the numbers that were sold.

Witness: Pardon me. The number of sales of the drop bottom in 1921 was something over 100, and in 1922 a matter of approximately the same number. The business in ditchers has amounted to approximately 150 in the average year, and the business in ditchers was simply carried forward on the drop bottom ditcher, from 1921 forward. All told there were some 1100 of the ditchers that have been sold to date, of the drop bottom ditcher. That is as near as I can answer from memory.

Q. State whether or not the machines you sold under these patents have been marked with the word patent and the date, or the word patent and the number of the patent? A. All of the machines which we have sold have carried patent license, or patent plates, showing the number of the patents on the machine, and in recent years the date also; both date and number.

Mr. Corbett: Your Honor, if he is answering of his own knowledge, that is one thing; but I don't believe he knows.

The Court: You will have to cross-examine him on that.

(Narrative continued.) Under the Clutter patent the machines were marked by the date of the patent, and with the word, "Patented," and our name. The machines under the first Downie patent were marked by

the date and number, or the date and the word "Patented". The same general marking was applied to the machines of the second Downie patent. Now, as to the marking of the third and fourth Downie patents, these patents have issued since our beginning the practice of showing both the number and the date. I have seen plates on the machines, on hundreds of them. How many machines, I do not know. I do not see every machine that leaves the plant, but I see the machines currently from day to day as they leave the plant, and all of the machines that I have seen leaving the plant carried patent plates.

These defendants have been notified of their infringement by letter. I produce letters with respect to the Osgood and the General.

The Court: Any question about them, Mr. Corbett? They were sent by registered mail, weren't they?

Mr. Richey: I think they were.

Mr. Corbett: I think that these letters were sent and received, probably. I do not recognize all of them, but I recognize the letters that we wrote.

Mr. Richey: I offer in evidence those relating to the Osgood Company, notice by plaintiff, as Exhibit P-22, and I offer in evidence the letters of notice to the General Company as Plaintiff's Exhibit P-23.

Mr. Corbett: We want to reserve an objection to them until we have an opportunity to check them.

Mr. Richey: If Your Honor please, we have now reached the point where we would like to go out and show you this machine operating.

Mr. Corbett: I would like to ask Mr. Richey if you are going to show the machine of the patent, and if so, which patent.

Mr. Richey: Why, this is the latest machine of the company, as shown here in this catalogue, and embodies all the inventions of all the patents.

Mr. Corbett: Your Honor, if you are interested to see this machine, why we don't want to stand in the way, but we object to the showing of a machine that is not relevant to this case. And I want to say in connection with the plaintiff's request that we demonstrate a machine or place a machine on this lot, that we, at the end of this case or later in this case after your Honor has a more complete view of it, if at any time you would care to

have us stage a competitive demonstration between the Osgood Company and the Keystone Driller Company under actual working conditions, we would be glad to do so. We leave that up to you. This showing here is merely for the purpose of comparing two machines which are really not even machines of the patent, as I understand it.

The Court: You mean that this machine that Mr. Richey has over here is not?

Mr. Corbett: He says it is a modern machine, but no doubt that will be brought out by the evidence. I think we will probably bring out the fact that there are features in it that are not involved here.

Mr. Richey: All right. I will take that up with the witness right now.

Q. Mr. Downie, where is the machine located that we are going to demonstrate to the Court?

The Court: Well, it is on the Sam Davis lot.

Q. Well now, compare that machine with the one I have shown you here in the catalogue, which I will mark Plaintiff's Exhibit P-24? A. It is the same machine as that shown in Plaintiff's Exhibit P-24.

Q. Does that embody any of the inventions of the patents in suit here, and if so, state of which patent? A. All of them. That is, the Clutter, the first Downie, second Downie, third and fourth Downie.

Mr. Richey: I offer that in evidence as Plaintiff's Exhibit P-24.

Mr. Corbett: Your Honor, if we are going to look at this machine—of course, we cannot pass on a comparison of the machine until we see it—but if we are going to look at this machine, or if there is going to be any discussion or explanation of the machine, we would like to have the stenographer along.

Mr. Richey: Yes, the stenographer should go along. That is perfectly agreeable to us.

The Court: You can take anybody along you want to. Mr. Corbett, do you think you would rather cross examine this witness before you go out there?

Mr. Corbett: No. I think I would want to see the machine first.

The Court: You want to see the machine, too, do you?

Mr. Corbett: Well, we have seen the Keystone machine before, and I think we can stand it to see it again.

Mr. Richey: We can suit the convenience of the Court. We can go now, or leave right after lunch.

The Court: I think the thing to do would be for everybody to get lunch, and start from here about 12 o'clock, to save time.

(Noon Recess.)

(Wednesday afternoon session; March 4, 1931.)

Mr. Richey: May the record show that the court, counsel and experts for the parties went to the coal yard of Mr. Samuel Davis, between Elm and Lagrange streets, Toledo, and watched the demonstration of one of the plaintiff's commercial machines such as illustrated in Plaintiff's Exhibit No. P-24.

Q. Mr. Downie, will you give a brief description of what was done at the demonstration before the court, counsel and experts for both parties which we just attended? Just more or less a list of the operations? A. The operations which have been described were executed by the machine included the striking of a blow, the beginning of excavation, the under-cutting of a wall, the rooting and the discharge of the scoop by both the dumping of the bottom and by simple inversion, and elevating the boom to such a position that the bridle and heels or abutments functioned for avoidance of the blind spot. The bottom was closed by momentum. That, I believe, summarizes the operations.

(Narrative continued.) The two catalogues of the General company, marked "Exhibits P-25 and P-26" and two groups of photographs marked "P-27 and P-28" show the General commercial machine, illustrating the ditcher at the central view on page 2, and elsewhere, in the catalogue, Exhibit P-25. I have seen these machines in operation, principally in the East, at New York and other locations in that neighborhood, before the bill was filed in this case. I will compare the ditching machines illustrated in those catalogues and photographs with the machines of the patents in suit and the plaintiff's commercial machine, where it relates to the patented features.

For the purpose of comparison I would select the Plaintiff's Exhibit P-27. Have you copies, Your Honor (shown court)? A series of photographs, the first view marked with the letter A. The machine shows a boom, the member on which the word "General" is lettered, corresponding to the boom 2 in the first Downie patent.

There is the stick appended to the outer end of the boom corresponding to 11 in the patent; the scoop attached to the lower end of the stick by means of the channel-shaped overhead bail as developed in the third Downie patent; the side rake teeth are clearly apparent of the form of the fourth Downie patent; the braces bracing the rear end of the scoop and attached at their upper extremity at an intermediate point in the length of the stick are visible; the hauling line is attached by means of a bail to the scoop, the bail being pivoted to the side wall; the hauling line extends over a deflector sheave located upon the boom and extending into the winding mechanism of the machine which is hidden from view by the cab. There is the hoisting line extending from the machine to a sheave carried in a bridle which, in turn, is pivoted to the head of the stick. The bridle in this machine is straight and in the position shown in views A and B is apparently put in contact with abutting ledges upon the stick members which function as the abutments of the second Downie patent. The bottom of the scoop is pivotally attached to the body and is releasable by a hand-operated line attached to a latching mechanism, and is so pivoted and mounted as to be closable and in operation is closed by momentum as set up by the coordinated manipulation of the hauling and hoisting lines. The bridle parts contact with the ledges or shoulders upon the stick members when the boom is lowered below a certain point, approximately the point shown in view A of Exhibit P-27.

The Court: Is that the construction that avoids the blind spot?

Witness: Yes, sir.

The Court: Is that on here? This picture does not show it, does it?

Witness: I shall look for other views which show in more detail the formation of ledges or shoulders which function as the abutments of plaintiff's second patent: View D of Plaintiff's Exhibit P-27 illustrates this construction. It will be there seen that the inner flanges at the rear of the head of the stick have been cut away for the clearance of the bridle in its rotation about its pivot to the stick; and that at the lower extremity of that slot there are shoulders upon which the bridle may contact at a certain point in the elevation of the device; and on the under edge of the bridle there is apparent a notch worn by this contact, indicating the pressure developed

between the bridle and the ledges or shoulders referred to, due to elevation of the device into the blind spot range; and such contact functioning to prevent the sluggish action which would be developed.

The Court: Is that the same construction as yours?

Witness: The construction is like it, Your Honor, in function, although we do not use a bridle extending between the members of the stick. We, in the construction we have shown this morning, cut the stick off at a point closer to the boom than is done in the defendant's machine, causing the bridle to contact directly upon the head of the stick rather than upon a ledge removed some distance from the upper extremity. The functioning of plaintiff's structure and defendant's structure is precisely duplicate although the details of the structure are altered.

The view E of Plaintiff's Exhibit P-27 illustrates the link in contact with the shoulders of the stick members as when the device has been elevated into the critical range, and where the deflection of the hoisting sheave would be desired and is used to obtain the focus for outthrusting the lower end of the stick.

View F shows the machine with the bottom opened, that is, hanging vertically as employed for discharging material or in the position preparatory to closure.

View G is a similar view.

View H may be referred to as indicating the structure of the third Downie patent, showing the channel-shaped overhead bail of this defendant, the bail being of course integral with the scoop and receiving between the side walls of it the base of the stick. The base of the stick carries joining or clip angles, secured to the stick members on the one hand, and secured to the bail of the scoop by means of bolts which are apparent. These bolts are and can be subjected only to tension stress, the stresses vertically upward in the scoop being transmitted as a shoulder stress upon the base of the stick for the opposite construction. There is a bolt at the rear of the scoop fastening the braces to a ledge located upon the rear wall of the scoop.

(Whispered consultation between court, counsel and witness.)

Witness: A question has been asked as to the views D and E, as to whether the upper end of the stick as shown in E is the same as that shown in D—if I understand the question.

Mr. Reed: That is right.

Witness: Yes, as I read these views, the identical parts are shown here. In the view E the uppermost extremity of the stick is the same as the extremity located at about the elevation of the upper edge of the bridle in view D.

Mr. Reed: I see it now. Thank you.

Q. Is that all? A. Yes, sir.

Q. The machine of the defendant, the General Company, operates the same, performs the same functions and realizes the same advantages as the machines of the patents in suit? A. That is correct, sir.

Mr. Richey: I will offer those catalogues and photographs and exhibits as Plaintiff's Exhibits P-25, P-26, P-27 and P-28, respectively.

Q. I now hand you a catalogue of the Osgood Company, which I have marked P-29, a group of photographs of the same machine which I have marked Exhibit P-30, and the second photograph which I have marked P-31. Will you look at them and see what they illustrate?

Mr. Mahoney: Just a moment. Objection.

Mr. Corbett: We want to reserve an objection to the photographs until we have a chance to examine them.

Mr. Mahoney: To all three of these exhibits.

The Court: All right.

Mr. Corbett: I did not get the question.

Mr. Richey: I asked him what they show. You do not deny that; you stipulated it.

(Photos shown counsel.)

Mr. Corbett: We want to object to the introduction of these photographs. We do not know what they show; who took them; whether they show our machine or not. They must prove them in the regular way.

Mr. Richey: We will ask the witness about it.

Mr. Corbett: You will have to prove he took the photographs.

Mr. Mahoney: We object to them.

Mr. Richey: All right. The objection is noted.

Mr. Corbett: These are Exhibits 30 and 31?

The Court: 30 and 31 are involved now?

Mr. Richey: Yes.

The Court: And the question is whether they are photographs of their machines?

Mr. Richey: Yes.

The Court: All right.

Q. I will ask you what they show? A. All of these photos and the ditcher views in the catalogue pages illustrate the Osgood commercial ditcher.

Q. Have you seen machines like those illustrated in Exhibits Nos. 29, 30 and 31? A. I have seen several machines identical with these at various times.

Q. Have you seen them operating? A. Yes, sir.

Q. In commercial operation? A. In commercial operation.

Q. Where and when? A. I have seen them principally around New York. I have the location of one such machine I saw.

Q. The particular location does not matter; within what range of time? A. Within the past three years.

Q. Is the same machine illustrated in all those Exhibits, 29, 30 and 31? I do not mean the same identical machine but the same type of machine? A. Exactly the same type and form of machine. There are minor distinctions notable. One view on view No. 1 of P-29 shows what I believe is an earlier form of the Osgood ditcher in which the stick is of somewhat lighter construction than their later commercial construction. But as to function and as to general arrangement, all of these ditchers are alike.

The Court: The same machine with a heavier stick, is that it?

A. That is right.

Q. You did not take those photographs yourself? A. No, sir.

Q. Were you present when any of them were taken? A. I was not present when these were taken.

Mr. Corbett: We do not think those photographs are relevant here. He has not proved he knows they were taken of the Osgood machine.

Mr. Richey: They have Osgood marks all over them.

The Court: He is in the same position that Mr. Osgood or Mr. Corbett or I would be. I would be able to identify a picture of you whether I took it or not. There certainly ought not to be any question about it.

Mr. Richey: He said they are all the same. Look them over and if there is anything that ought not to be on there, you can point it out.

(Counsel looks at photographs.)

Q. Will you compare the Osgood machine, shown in Exhibits 29, 30 and 31, with the machines of the patents

in suit and the plaintiff's commercial machine, in structure, mode of operation and results? A. For the purpose of comparison I would refer His Honor to view No. 3. (Shown court.) Of Exhibit P-29; being one of the advertising catalogue or leaflet views in which there is a boom, the member bearing the word "Osgood," and which corresponds in function to the boom 2 of the first Downie patent; a ditcher stick corresponding to the member 11; a bridle corresponding to 16 of the patent; hoisting sheaves corresponding to the hoisting sheave 17 of the patent; a hoisting cable of multi-reeving corresponding to the hoisting cable 18 of the patent; a hauling cable attached by means of a pivoted bail to the side walls of the scoop and corresponding to the element 43 of the patent; a bottom pivotally attached to the scoop walls and corresponding to the element 25 of the patent; side rake teeth attached to the side walls of the scoop and overhanging the pivot bolts of the bottom and flared to cut side clearance and corresponding to teeth 27 of the patent. There are braces extending from the rear end of the scoop to an intermediate point in the length of the stick and corresponding to the braces 20 of the patent. The stick is pivoted to the outer extremity of the boom as in the patent, the pivotal point of the patent being numbered 6. The bridle is pivoted to the upper extremity of the stick at a point corresponding to the attachment point 15 of the patent. There is a sheave carried upon the boom of the Osgood machine corresponding to a similar sheave in the patent drawing. The operation of the machine is precisely similar to that of the plaintiff. It performs all of the functions of the same device in the same manner.

Q. Can you point out the parts that prevent the occurrence of the blind spot? A. Referring to the same view—

The Court: Referring to the same exhibit?

A. The same view of the same exhibit, yes.

The Court: All right.

A. View 3, Exhibit P-29. The bridle may be seen to be disaligned from the direction of the pull in the hoisting line. This indicates the functioning of the abutting device of the Osgood machine, and I refer to view B of P-30 for the specific structure employed by this defendant as one element of the heel device. The inner face of the Osgood stick carries a channel of which the flanges

face away from the machine and the sticks in operating arrangement and the upper extremities of the channel which passes underneath the stick pivot bearing which terminates at just such a point as to serve as a shoulder or ledge upon which the bridle, apparent in other views and corresponding to the bridle 16 of the patent, may and does contact as the device is elevated into the upper discharge range. In the views shown the channel may be seen to have been battered somewhat on the shoulder referred to. This has resulted from contact and functioning as an abutment. In the view 3 of P-29, the side of the channel to which I have just referred can be seen to terminate just underneath the bridle in the position there found. The bridle is resting upon the upper extremity of the channel and is preventing closer approach than is here shown by the bridle to the stick; in other words serving as a stop and preventing the angular approach of these elements. Any means for effecting this limitation of course performs the function of the patented device.

The Court: You say they infringe if they use a different construction to avoid this blind spot.

Mr. Richey: It is performing the same functions in the same way.

Mr. Corbett: If it did perform the same function but was substantially a different structure, do you maintain that would be an infringement?

Mr. Richey: Yes.

Mr. Corbett: You maintain that anything which performs the same function is an equivalent?

Mr. Richey: I would not answer a broad question of that kind. The range varies with the character of the invention. A pioneer invention is entitled to a wider range of equivalence. I would not want to answer the general question. I will answer this specific question.

Mr. Corbett: We are not even admitting it performs the same function.

The Court: As I get it the purpose of one of these inventions is to avoid this blind spot. My question to Mr. Richey is whether he has a monopoly on removing that blind spot regardless of the kind of construction.

Mr. Corbett: That is what I challenged him on.

The Court: He says that under the doctrine of equivalents he has.

Mr. Richey: As far as this case is concerned.

The Court: And that this particular construction comes within the range of equivalence to which he is entitled.

Mr. Richey: That is right. I am not answering the question beyond the scope of this case.

Q. Are those parts marked letters sheet No. 9, Exhibit 29? A. A number of these parts have been marked with reference letters.

Q. Are those parts preventing the blind spot shown in that view? A. The view is not very distinct. I will have to refer to something more distinct.

Q. All right. Do any of these views show the construction in the third Downie patent? Can you point that out? A. The views—

The Court: That is the assembly patent?

Mr. Richey: Yes.

Witness: The views of P-30, and particularly views C, D and E show the structure of the third Downie patent. In view C, a diagonally directed view from above the scoop which is lying upon the ground, the angles which form the feet or ledges of the ditcher stick may be seen, and the boltheads are apparent.

The Court: Two of them or one?

A. Two, by which the feet of the stick is attached to the overhead bail. The bail flanges are here apparent, the reinforcing structure of the bail consisting of two angles, of which the horizontal forks or legs meet at the mid-width of the bail. The bolt for tightening the two flanges into gripping relationship with the foot of the stick is apparent. The other views are substantially similar, except that view E shows more distinctly the two bolts used on each side for attaching the foot of the stick to the bail.

Some of these devices, links, bridle are straight, and others are angular. The functions are precisely the same. The bridle may be curved upwardly at its mid-length; it may be straight or it may be curved downwardly at its mid-length. The curvature, so far as the functioning for this purpose is concerned, is not material.

Q. With respect to the adoption by the plaintiff of the various inventions of the five patents in suit, when did each of these defendants begin its infringement—

Mr. Corbett: Objection. What constitutes infringement is a question for the court.

Q. Change that word "infringement"—begin the manufacture of the machine shown in Exhibits 25, 26, 27, 28, 29, 30 and 31—

Mr. Corbett: Objection.

Question cancelled.

Q. With respect to the adoption by the plaintiff of the various inventions of the five patents in suit, state, if you know, when each of the defendants began to manufacture the machines shown in these catalogues and photographs you have just been discussing?

Mr. Corbett: Objection. I question his right to assert the things in question are inventions and have been adopted by the defendant.

The Court: The only thing Mr. Richey is trying to get at is when did the defendants begin the types of construction which you have described and referred to in these various exhibits. That is what you want, Mr. Richey?

Mr. Richey: Yes.

The Court: Do you know when?

Witness: I have seen them for the past four or five years. I cannot state more definitely than that. It was some time prior to that.

Q. Go back to the time when you first saw the machines. State with respect to the time of the adoption of the inventions of the patents in suit by the plaintiff when those events occurred; that is, did you see them between the time the plaintiff adopted the inventions of the third and fourth Downie patents, or was it some other time?

Mr. Corbett: I think he ought to confine himself to the structure. The court determines what those inventions were.

Witness: In each instance in which I have seen infringing devices as here shown by the defendants, I have seen such devices after we had made and were using commercially the patent or the structure of the patent which defendants' machines infringed; that is to say, for example, the generous use of the bail patent.

Mr. Corbett: I object to this witness stating that these were infringing devices. That is a question for the court.

The Court: I quite understand that.

Mr. Richey: We apologize for that. What he means are the devices he has been discussing.

The Court: This witness thinks these are inventions and that your devices are infringements; but the court

has ultimately got to decide those questions. It does not make any difference what terms he uses.

(Narrative continued) Both defendants came on the market with their machines after the plaintiff had adopted the improvements of the Clutter patent and the first three Downie patents. With reference to the fourth Downie patent the General adopted the kind of a tooth shown in their machines subsequently to our adoption and commercial offering of them. I don't know the precise date. We began the use commercially of the form of tooth of the fourth Downie patent in January, 1925.

The Court: Up to that time you had seen no such device on any of the machines of either of the defendants?

Witness: That is correct, sir.

Q. Are you familiar with the machines of the defendant that were in the case of the plaintiff herein versus the Byers Machine Company? A. Yes, sir.

Q. There were three separate Byers machines in that case, were there not? A. That is right, sir.

Mr. Richey: I will offer in evidence three groups of photographs or photostats that were referred to by the witness, as Plaintiff's Exhibits P-29, P-30 and P-31.

(Consultation between court, counsel and the witness.)

Q. I show you three sets of photostats, marked P-32, P-33 and P-34. They show the first, second and third Byers machines, respectively, do they not? A. That is correct, sir.

Q. How did the operation and results of the first and second Byers machines compare with those of the General and the Osgood companies in this case? A. Their functioning was the same as that of the two defendants herein, in respect to all of the things which I have referred to previously; and all of the various elements: boom, stick, scoop, bottom, side rake teeth, bridle, abutment of bridle upon the stick limiting the approach of the bridle to the stick, elimination of the blind spot by such limitation of approach, the functioning of the hoisting lines and the hauling lines, and releasable latch for the bottom, momentum closure for the bottom.

Q. That is as far as the Clutter and the first two Downie patents are concerned? A. Yes, sir.

Q. And the third Byers machine operated and performed the same functions as the machine of the first Downie patent; that is correct, is it not? A. That is correct.

Q. None of these machines embodied the improvements in the third and fourth Downie patents? A. Correct.

Q. They came on the market before the plaintiff adopted the improvements to the third and fourth Downie patents? A. Yes, sir.

Mr. Richey: I offer them in evidence, Plaintiff's Exhibits Nos. P-32, P-33, and P-34.

Mr. Corbett: You have offered them as part of the record of the Byers case.

Mr. Richey: No, they were not in the record; they went up as physical exhibits.

Mr. Corbett: We wish to reserve an objection to each of those exhibits.

The Court: All right. They will be admitted without prejudice to your making any objection to them later if you see fit to do so.

(Narrative continued.) The chief commercial method of trench excavation and cellar digging in use at the time the Clutter machine was marketed by plaintiff was hand work. Another method of trench excavation was that which we have referred to as the multi-bucket method; that is a machine in which a series of buckets passes up along the face of the excavation, the buckets being carried either by an endless chain or a large structural wheel carrying the material to the surface of the ground, and by discharging by inversion of the buckets, and the spoil being carried laterally by means of a conveyor belt.

A third method employed at that time was the forward or outward arc scoop as carried upon dipper sticks of the type that has been called either forward arc or regular steam shovel bucket, and as adopted for trench work by the use of extraordinarily long dipper sticks, so that the machine could be placed upon bridge mats over the open trench, and could thereby reach down into a trench, into moderate depths at least, and excavate by the forward thrust of the scoop, bringing the load to the surface and revolving laterally and discharging upon a spoil pile, or turn the full half circle and discharging upon the laid conduit sewer line or water line.

Another method for below grade excavation was that which has been described here and called the drag line, in

which an integral bucket is carried at the end of a hoisting cable which extends over the end of a boom, the bucket being usually somewhere beyond the plumb position, and dragged toward the machine by a hauling line, the scoop being so proportioned as to ride upon its underface or side, gathering material in its passage; being then elevated by its hoisting cable and swung laterally for discharge, discharge being effected by release of all tension upon the hauling line. This method was used, is still used, in large open ditch work to ground deposit, that is, it is not suitable except at prohibitive care for loading ordinary size conveyances.

Another method which was coming into some use for certain kind of trenching just about the time of the Clutter advent, or shortly thereafter, was the clam-shell, which is suited for excavating soft materials and is economical to use only at relatively greater depths than these other devices can attain. For instance, trenches 25, 30 or 40 feet deep, in soft material and requiring to be shored up to prevent cave-in indicate the use of the clam-shell scoop. Sometimes the material is loosened by picks in the hands of workmen.

Q. They just drop the bucket down and bring it up? A. Yes, sir.

Q. You did not dig any rock at the demonstration this morning? A. No, sir.

Q. Why was that? A. There was no rock available, and so far as we could find by investigation, there was no suitable place where we could dig shale.

Q. Have you a moving picture of this machine digging a hard substance? A. We have a moving picture of a machine digging at our testing grounds at Beaver Falls, upon a very large slab of hard concrete, and in which we strike a gravity blow.

Q. How does that compare with rock? A. It is extremely hard. This testing block we have is chosen especially for that purpose and it is harder than any commercial rock that we encounter, except the trap rock of the Jersey coast, and, of course, granite is harder. But it is in the class of extremely hard materials.

Mr. Richey: If your Honor please, we should like to show that picture. It will take about three minutes to set the apparatus up.

Mr. Corbett: We would like to know whether the witness took the picture. We cannot tell from the pic-

ture what kind of ground was being dug. Is he going to testify to that?

Q. You saw the picture taken? A. I took part of the picture and gave instructions for the taking of the rest of it.

Q. The fact is you are shown in the picture? A. I believe I appear in the picture at one point.

Mr. Corbett: We object to the picture.

The Court: Overruled. Save your exception: Set up the machine.

(Thereupon a certain moving picture film was screened for the court.)

Mr. Richey: I will offer the film in evidence as Plaintiff's Exhibit P-35.

Mr. Corbett: I want to object to the introduction of that movie in evidence for several reasons. One reason is, it is not shown that that machine is the machine of the patent in suit. The second reason; there is no clear way of determining the nature of the ground being operated on.

The Court: Well there is testimony here as to that latter point. As to the machine, is there any evidence about that?

Mr. Richey: I will ask him.

Q. What kind of machine was that, Mr. Downie, used in the moving picture film which I have offered in evidence as Plaintiff's Exhibit P-35? A. The machine there was just like the machine which was demonstrated this morning except in the movie the scoop was wider than this scoop.

Mr. Corbett: Objection on the ground that this is a different machine from the machine of these patents.

The Court: That will go to your main case.

Mr. Corbett: We are just offering that objection.

The Court: The objection is overruled.

Mr. Richey: That is all of the direct examination.

Cross Examination by Mr. Corbett.

I am thirty-six years old. I worked intermittently for the Keystone Driller Company from the years 1912 to 1919; that is, to the latter part of 1919. That would make me in the neighborhood of about eighteen when I first went there. By intermittently, I meant that I worked during Summer vacations. I was in school then.

When I first went there I was in Geneva College, Beaver Falls; and at the University of Pennsylvania in the years 1916 and 1917. I worked at the Keystone Driller Company approximately three months of the year. As to the nature of the college work I took, the first years mathematics and trigonometry, and so far as bearing upon engineering work was concerned, general English courses, general science, languages. At Geneva, I believe I took two terms of geology. I did not take engineering either in College or at Pennsylvania.

Q. You have spoken of various features and functions of these various machines. I wish you would refer to the LeRoy Clutter patent in suit and point out anything in the claims or specification of this patent which indicates that the machine had the function of digging rock?

Mr. Richey: Your Honor, we did not ask this witness about the claims; interpretation of the claims is a function of the court, the same as the interpretation of counts of an indictment. This witness is a mechanical engineer, not a patent expert.

The Court: What you are going to develop is that these claims do not refer—

Mr. Corbett: I am not asking him to interpret claims. I want him to point out some thing there that covers rock digging.

The Court: It is conceded they do not; and the Court of Appeals says it does not make any difference whether they do or not.

Mr. Corbett: I do not so understand it, Your Honor.

The Court: That is the way I understand the decision. Let us look at it. That was a surprise to me; that is the reason I noticed it.

Mr. Corbett: I think the rule, Your Honor, is it either must refer to the claims and specification or be inherent in the machine.

The Court: The Court of Appeals has said something on the subject. (Court refers to case.)

Mr. Richey: That is the established practice.

The Court: "This Court has held that the patentee is entitled to the benefit of every invention within the scope of the claims and actually possessed by his mechanism, even if he does note it at the time of patenting."

Mr. Corbett: He must show, however, that if the matter is not disclosed in his specification or claims that it is inherent in the machine.

The Court: Well, I am reading that to you. If you want to pursue it in view of what the Circuit Court of Appeals said, go ahead.

Mr. Corbett: I would like to raise that question, to some extent.

Question read.

The Court: Referring specifically to claim 4 of the Clutter patent?

Mr. Corbett: I told him any claims or the specification. Of course claim 4 is the one sued on.

The Court: All right. You are asking as to any of the claims.

Mr. Corbett: Anything in the patent that describes them.

The Court: All right.

Witness: (Refers to patent) As to reference to the work of rock digging, I do not find such reference in the specification or the claims; but the structure of the machine as shown possesses the ability to pick rock, as has been demonstrated with the model here offered, and as I can again demonstrate if you desire.

Mr. Corbett: We think it is unnecessary for him to go talking about the model. Just confine yourself to the machine.

Witness: That then completes my answer.

Q. It is your claim, is it, that the machine of the LeRoy Clutter patent will dig rock? A. Yes, sir.

Q. What kind of rock? A. We do not undertake to dig solid rock of the class of good hard sandstone, nor anything of equivalent hardness. There are other rocks which are still harder which we cannot dig commercially; but rocky ground which is too hard to dig without the gravity blow can be, and I have frequently dug it with the Clutter machine by means of the gravity blow as a mode of attack.

(Narrative continued.) My actual operation of steam shovels, I believe, has been between fifteen and twenty machines, which I have demonstrated. I am an operator of shovels, and have worked by the day, operating shovels. I was employed in fifteen to twenty demonstrations. By demonstration, I mean approximately one week's demonstration of a machine as is commercially done by our companies. I ran a machine day in and day out a week or two weeks. I don't think I worked

over three weeks on one machine—that in Halifax, in 1929.

The Court: For the purpose of selling?

Witness: Demonstrating its performance as advertised; and at the conclusion of the demonstration to settle up for the machine and break in the other operator, teach him the duties of operation and repair; in other words, the final contact of the company with the customer.

(Narrative continued.) My digging experience has been in various parts of the country. In a sense, picking and the gravity blow are the same; that is, the gravity blow is used in order to pick. The picking is the result of the blow, the mode of operation. The gravity blow is a complete dropping of the shovel scoop. As I explained yesterday, the gravity blow is primarily developed from the force of gravity acting upon the scoop, and, to some extent, upon the weight of the stick. It is augmented practically and its effectiveness heightened by a coordinate manipulation of the hauling line, which I have illustrated, whereby the hauling line, due to the inner alignment of the stick, at the instant just before the blow is struck has a speed advantage over the scoop. A one-inch retraction of the hauling line will cause an eight-inch fall of the scoop in a like interval; and since this speed is equal to and usually in excess of the acceleration due to gravity alone, it accumulates with the effect of gravity in causing the impact of the scoop. I mean by gravity blow both of these things.

Q. Can you tell us without so much language? Do you actually take the scoop, in striking this gravity blow you speak of, and drop it without any support from the hoisting line? Let us be simple about it. Do not let us have so much language, if we can avoid it. I want to get this clear in the court's mind. A. I have stated a number of times that the scoop is dropped.

Q. You let the hoisting line absolutely free? A. Certainly.

Q. And permit the scoop to drop? A. Certainly.

Q. And that is your contention about the way to strike a gravity blow, is that right? A. As I have stated previously.

Q. Are you sure of that? A. Positive.

The Court: You give some slack and that causes that to drop?

Witness: That is right, sir.

Q. How far do you let it drop? What is a fair average drop of the scoop? A. You let it fall until it has acquired some velocity.

The Court: How many feet high is it when it starts?

Witness. Anywhere from 4 to 10 feet. Of course any height down from zero up to 10 feet. Sometimes one will strike a short jabbing blow, 1 foot drop; sometimes 3 feet; sometimes 10 feet.

Q. Did you ever do that? A. Yes, sir.

Q. Day in and day out? A. No, sir. That is not commercial. I am stating the extremes for purposes of illustration.

Q. What is commercial? A. Commercially a 3 or 4 foot drop is usual.

Q. During that three or four foot drop, it drops freely without any restraint from the hoisting line? A. The scoop drops not only freely but is accelerated by the manipulation of the hauling line which I have explained.

Q. But it is not supported by the hoisting line and it has the weight of the boom added to it? A. No, sir. You apparently have not understood my previous explanation.

Q. Is the stick added to it? A. I said the scoop and a portion of the weight of the stick enter as a weight factor in the gravity blow. The boom weight does not enter the gravity blow as a factor.

Q. But that portion of the weight of the stick and the whole weight of the scoop is not restrained by the— A. Retention of the hoisting line; that is correct.

Q. How much have you ever done that, Mr. Downie? A. One does not operate that way regularly. I have used it when I had occasion to.

Q. What do you mean: does not operate that way regularly? A. If the material is sufficiently soft that it can be dug, as this material was today, without using the blow, one does not employ it. In the ordinary course of operation one digs by the ordinary slow motion method.

(Narrative continued.) The gravity blow is not the ordinary slow motion method for soft materials. When-

ever the material is so hard as to not be readily diggable by the normal passage of the scoop through the material, then the material may be fractured at will and to whatever extent necessary by the operator by means of a gravity blow. This type of material would be shale and materials of corresponding or equivalent hardness. It is not customary to use the gravity blow continuously in digging shale but it is used more for the purpose of getting an entry to a stratum rather than for the actual fracturing of all the material removed. It will be understood that once a stratum has been entered or penetrated, it is easier to continue operation especially with this latest form of tooth, than to enter in the first place. The gravity blow is in some sense an initial operation to get down to the floors, and can be utilized later if and when necessary.

When digging in shale, it occurs in various thicknesses; more usually shale is encountered five or ten feet below the surface, than right at the surface. Usually there is soft material at the surface of the ground. I don't believe there is any regularity in the occurrence of shales under the surface of the ground.

Q. You speak of the initial operation of dropping: that does not mean the first blow; that you have a gravity blow your first blow, and then all of the rest of the blows are not gravity blows? A. An operator will, upon encountering shale, first endeavor to dig it by the normal digging method. If the shale is soft, he may be able to execute it with the normal or slow motion method. Failing in that he will strike a relatively short blow, and can increase the force of the blow at will, to fracture it and get down.

Q. And that was quite frequently done in the Clutter device, is that right? A. Yes, sir.

Q. In the Clutter patent, on page 1, beginning on line 10, it begins a description of operation, and the matter I want to direct your attention to and the court's attention to, reads as follows: "In the operation, assuming the device to be in the position shown in Figure 1, the pulling member 21 is gradually released, lowering the boom until the scoop 3 is in contact with the material to be removed." And then it goes on. You do not find anything in that description which indicates a gravity blow, do you? A. As I stated previously, there is nothing in that description alluding to the gravity blow.

Q. That indicates that the shovel is operated with a gradual release of the hoisting line? A. That is the method described there.

Q. And in the operation of this LeRoy Clutter shovel, it was the practice in closing the scoop to—we will say the scoop is pivoted and hanging down after the dumping operation? A. Yes, sir.

Q. Now it was the practice to place the point of that scoop on the ground, and then let the stick drop so as to close that scoop, was it not? A. It was possible to close the scoop in that way; but the usual method of operation was simply a slight restraint on the hauling line as the scoop reached out, and this slight restraint just put the scoop into closed position; and then restraining the stick.

Q. Evidently Clutter did not think so. He says on Line 10, Page 2, as follows: "The point of the scoop 3 coming in contact with the material will cause the pin 5 to slide to the top of the slot 16A and engage with the latch member 8"—is it not? A. That is correct. It will do so.

Q. Now in the Byers case you testified at the bottom of page 60 and the top of page 61, in answer to the question, about how hard a blow can you hit with these scoops; you said, "Depending upon the height to which the scoop is elevated. The common force of blow, the impact struck in this gravity blow would be three or four or five thousand pounds of energy, being simply arrived at from the factors of the weight of the scoop and distance through which it falls; the one multiplied by the other; and the scoop in our commercial construction weighs anywhere from 750 pounds, in our very narrow models, to 2000 pounds, in our extremely wide models; but a thousand pounds is a fair average weight, and four feet of fall is a fair average drop; and the foot-pound measurement of the blow is arrived at as simply a product of the different factors"; is that correct? A. That is correct.

Q. But that is not the usual thing in the operation of these shovels, is that not correct; do you strike a blow of that nature? A. We strike a blow of much greater severity than that; we did so in this movie.

Q. You will admit that it is usual not to strike a gravity blow; in fact if you strike a gravity blow at all it is only an exceptional mode of operation? A. That is the mode of attack used when needed, according to the hardness of the material.

The Court: In a particular job you might have to use both kinds of operation?

Witness: That is right, sir.

The Court: You can never tell when you are going to strike a hard substance?

Witness: That is correct.

Q. But it is exceptional that you do have to use that gravity blow? A. On certain jobs the gravity blow—

Q. Answer the question: is it not exceptional? A. I am answering the question.

Q. Is it or is it not exceptional? A. That depends upon one's definition of what is exceptional.

Q. If you want to hedge about the matter, that is all right; but in the vast majority of jobs you do not strike this gravity blow, will you not say so? A. In the majority of jobs it is not necessary, if that is a satisfactory definition.

Q. And I think that that gravity blow that you claim to be used in this Keystone shovel only occurs at a certain portion of the digging stroke, is that right? A. That is correct.

(Narrative continued.) The gravity blow occurs at or close to the full outreach. The gravity blow, in other words, is not available to the operator at the inner two-thirds or three-fourths of the travel of the scoop. By full outreach, I mean the outreaching position of the device. That is the position in which the stick is in alignment or near alignment with the boom, whether the boom be horizontal or sloping diagonally downward into the open trench. It is alignment of the stick and boom which is important, rather than that the boom should be in horizontal position. Sometimes one says the horizontal position, meaning alignment.

Q. You had a different degree of outreach in your Clutter structure, with the upstanding link, from the degree of outreach in your Downie structure, without the upstanding link?—Does Your Honor understand that?

The Court: I am just trying to see if I follow.

Mr. Corbett: It refers to an upstanding support in the Clutter patent. The first Downie patent and the subsequent patents do not have that upstanding support. (Drawing exhibited to court.) There is no upstanding support to the sheave; that is one distinction between the two structures.

Witness: Now may I have the question read, please?

Question read.

Witness: I must ask what is meant by what degree of outreach. It is not a matter of angular measurement; outreach is a matter of distance.

Q. The matter of distance as I understand depends upon the length of the boom and stick? A. Yes, sir.

Q. Suppose you explain what you mean by outreach? A. As I explained a few moments ago, outreach is that position wherein the device is reaching out as far as it is capable.

The Court: Illustrate with this miniature. There is a certain point there where you could not strike a gravity blow at all?

A. That is correct, sir.

Q. This is the Downie device, is it not? A. This is the Downie device.

(Narrative continued.) The boom on the model is made an inch to the foot with the commercial machine, but not with the patent. They all come within and are approximately the same as the patent illustrations; but in both of these machines we have followed the commercial structure as to the stick and scoop and boom. Of course this is not the commercial rig up here.

Mr. Richey: That is the hand wheel part?

Witness: The hand wheel part, to enable hand operation.

(Narrative continued.) As to the outreach, both devices reach as far as their dimensions will permit. If their dimensions are the same, that is, the dimensions of the boom and the dimensions of the stick are the same, and the length of the lower arm of the stick, that is, the arm below the pivotal connection, you will be able to get the scoop of the Clutter structure out substantially the same as with the Downie structure. By the word "substantially," I mean substantially to the point where the teeth are pointing vertically or nearly vertically downward, that is, sufficiently close to the vertical to strike an effective blow.

I demonstrated a machine this morning which is one of our latest models. In that device, when you reach out to the fullest extent, the outer end of the stick, the scoop end of the stick may be caused to go up higher than the

pivotal connection between the boom and the stick, or it can be prevented from doing so at the will of the operator. This could not be done with the Clutter device.

Q. Then it cannot reach out as far in the Clutter device? A. It can reach as far in the Clutter device.

Q. It can? A. It can.

Mr. Corbett: Maybe I am dumb but I do not get this.

The Court: If you get up a certain height it will not reach out?

Witness: Precisely correct.

Q. I would like to have Mr. Downie explain, with this support tying down this link, how he can get this scoop—

The Court: He can get it straight out.

Q. Can you get it straight out? A. It is substantially straight out. I don't know to the inch that it would total the length of the beam and the length of the stick; but it is ample for the striking of this blow and I know, of course, has been used for a great many years.

Mr. Corbett: It is not a question whether it is ample; it is a question whether it is different; that is what I am trying to get at.

The Court: Could you get that stick out precisely horizontal from the ground?

Witness: Yes, sir.

The Court: If that is so, that is as far as it will ever go.

Q. You can do that during the operation of the boom in the air?—I don't mean by putting the point of the scoop down on the ground and letting it drop down; but in the actual use of the machine? A. No, sir, the stick will not quite attain to the limit of the boom in the Clutter device, nor this device, in mid-air, unless you bring in motions, and, as I have said, the outward swing of the stick and momentum made use of, and the boom allowed to fall leading the descent of the stick and the scoop; or it may be checked and the scoop allowed to lead the descent of the boom.

(Narrative continued.) I cannot at the moment refer to any catalogue which describes the operation or shows the structure of the Clutter device, the upstanding support member, as to the advantages of digging or

rock digging. I will search our earlier catalogues for such references.

Q. Now leaving the Clutter structure for a moment and going to your stop patent structure which is known as the Downie patent No. 2, No. 1,543,250, I think you testified in the Byers suit in substance that the question as to whether or not these stops or abutments or heel pieces—have you the patent here? A. Yes, sir, I have the patent to which you refer.

Q. Which are designated 23? A. Yes, sir.

Q. In the drawings in this patent you testify that your ditcher stick is divided theoretically into the arm below the pivot and the arm above the pivot, and that of course the arm below the pivot is very much longer than the arm above the pivot, is that right? A. That is right, sir, as I understand your question.

Mr. Corbett: Do you understand, Your Honor?

The Court: Yes, I think so. That is a theoretical division of that stick?

Mr. Corbett: Yes.

Q. And you testified in the Byers suit, did you not, substantially—I will refer you to your exact words if you want—that as your company and as you saw the matter, there was a continual conflict between the hoisting line which pulled upon the upper end of the stick and the hauling line which pulled upon the scoop; is that right? A. Not a continual conflict.

Q. Well, a conflict during the digging operation. Just say that briefly? A. A conflict or antagonism occurring whenever the boom is being supported by power, and the bucket hauled and its engagement maintained by hauling line power; there is an antagonism present between the two lines.

Q. And because of what you conceive to be that antagonism, you thought and your company thought that it was highly important to maintain the upper arm of that stick at a minimum length, is that right? A. That is desirable in our construction.

Q. And in order to maintain that minimum length, and in order to avoid this so-called blind spot, you put these stops on there, is that right? A. That is the utility of the stops, correct.

Q. If you had wanted to disregard that question of conflict of the hauling line and the hoisting line, you could have made that upper arm of the stick longer in

proportion to the lower arm of the stick, is that not correct? A. If one desired to make the upper end of the stick longer, it could be done. There is not structural difficulty about using longer channels.

Q. And if you made it long enough you could avoid the use of the stops, and at the same time avoid the blind spot, is that not right? A. Not with the correct direction of length of the arm, which is represented by a line drawn from the pivot 7 to the pivot 14; but the modification which you are proposing would swing that arm farther toward the machine; that is in the counter-clockwise direction in Figure 1.

Q. Which arm? A. Of that patent; the arm is represented by a line drawn—

Q. That is the upper arm? A. It is the line extending upwardly from the stick pivot, from the point 7 to the point 14. We desire that that arm be kept leaning forwardly so as to get the best and most advantageous outreach of the stick when in the lower phases of operation.

Q. That was your idea, was it not? A. Yes, sir.

Q. But that does not answer the question. If you had wanted to you could have made that arm long enough in proportion to the lower arm of the stick that you would not have that blind spot, is that not right? A. We could have made it longer, but not without sacrificing in the digging operation.

Q. But suppose you wanted to sacrifice in the digging operation, you could have made it longer, could you not, and have gotten away from that blind spot?

The Court: What you are trying to develop is that the blind spot comes on the particular place where this pivot is?

Mr. Corbett: Because he has a short upper arm; that is a fact, is it not?

Witness: That is a desirable thing.

The Court: He is trying to get at a fact now; not the desirability of it. Ask him again.

Witness: I believe I have the substance of Mr. Corbett's question. The upper arm could be made long enough if one disregarded these things which I have just said—the disadvantage of it—so that the blind spot would not occur before the teeth struck the boom. It would be possible to make the construction.

Q. Yes, I thought you would agree to that. Now as a matter of fact what you did when you put those

stops in there, you maintained your short upper arm, but in a certain elevation of your boom; you made your line—when you got it up as in the pictures in the Byers case—you made your line come in from a higher plane, is that not right; in other words you got a bend in the hoisting line? A. In the hoisting line.

Q. That is the line including the link? A. That is right.

Q. That is what you did? A. That is right.

Q. And that was for the purpose of keeping—I would like to have Your Honor follow this—the pivot 14—that is on Figure 1—

The Court: Yes, I understand.

Q. The pivot 7, which connects the boom to the ditcher stick and the pin 17 away from too close approach to alignment, is that not right? A. The three points which you have named cannot approach alignment any closer than they are in Figure 1. They of course form a firm structure when they are in this relationship.

Q. But what I am saying is you put those stops in there so those three points could not approach alignment too closely? A. That incidentally results; that was not the object.

Q. What was the object? A. The object was, stated generally, to maintain a force upon the upper end of the stick sufficiently to cause out-thrust in the foot of the stick; or, more specifically, to prevent the pivot 7 from intersecting the line of pull of the hoisting line extended.

Q. Well it was a question of approaching alignment of those points there you were trying to get away from, because if these points got too close to alignment, you had what you call a blind spot and could not control your range of dumping; that is your theory, is it not? A. That is substantially correct, as I understand it.

Q. If you lengthened the upper arm of that stick, and in addition to that if you raised the point at which the hoisting line 22 leaves the upper front of the machine, you can use both of those means to get away from that blind spot, is that not right?—Do you follow that, Your Honor?

The Court: Yes.

Witness: The height of the machine from the pivot of the boom 5 to the point midway between the two or however many reaches of the hoisting line enters the

calculation of the cable load and thereby enters the calculation of the upward turning movement upon the head of the stick. In a general way what you say is correct.

Q. It is an obvious thing, to reduce it to a simple proposition, if you do not want that blind spot there, you could increase the long upper arm, and you could increase the height or raise the point at which your hoisting line leaves the machine and entirely avoid that blind spot, is that not right? A. If the upper arm be lengthened sufficiently that the pivot 7 will not enter the line of the pull of the hoisting line, then the blind spot doesn't occur.

Q. In the Byers suit you called these abutments heels? A. Yes, sir.

Q. You sometimes call them heels, do you not? A. Yes, sir, we have referred to them by that name.

Q. You gave a demonstration there—have you got those pictures?

The Court: Are these the pictures you want?

Mr. Siggers: Here they are.

Witness: Are these what you wish, Mr. Corbett?

Mr. Corbett: Yes, but I would like to have a copy of them.

(Narrative continued.) I haven't examined the earlier Clutter catalogues to see if these catalogues showed rock digging or gravity fall. I will endeavor to locate anything of that kind that I can. I don't know whether it is in them or not. I wouldn't be certain as to that. I am not so clear as to the contents of the catalogues that I could state fully the practice at the time. As to whether the machine demonstrated by us today had any features not present in the patents in suit I will say I am not aware of any functions in the machine shown today which are not present in the patents in suit. Not if you mean by "features" the functional features, or do you mean some details of design?

Q. Would you say that the electric trip or the latch was a different functional feature? A. Not as to the d gging of the scoop at all.

Q. But anyhow that is a feature that is present that is not shown in any of your patents; that is right, isn't it? A. The machine today carried the electric trip, which is not shown in any machines of the patents, yes, sir.

Q. How long have you been manufacturing that electric trip?

The Court: Where is that electric trip?

Witness: Back of the ditcher stick. Well, it has a motor—just a moment, I will show it to you.

Mr. Corbett: What is the number of this Exhibit?

Mr. Richey: I think Mr. Edgerton can tell you.

Mr. Corbett: The machine is somewhat similar to the machine shown on the outside of Plaintiff's Exhibit P-24, and I might refer to the lower part,—this section here. (Indicating.)

The Court: Well, where is the electric trip?

Mr. Corbett: I think this is it up here, isn't it, Mr. Downie?

Witness: That is right, sir.

The Court: Where is that,—right up here?

Witness: It is placed right there; here is a small electric motor.

The Court: Any patent on that?

Witness: It bears a patent on the electric trip as a whole, as a thing apart from the ditcher, but that is not here in suit.

The Court: Who has the patent on that?

Witness: Keystone Driller Company.

Q. How long have you been using this electric trip? A. About five years; four or five.

Q. In a large percentage of the machines which are in use the bottom is tripped by hand, isn't it? A. Yes. Formerly, of course, the tripping was done by hand, but lately, and especially if the contractor is regularly using the bottom dump method of discharge, there is an increase in preference for the electric trip.

Q. So when you speak of this two-line control, it is clear that you are not speaking of or not counting the fact that in the majority of Keystone machines one man stands on the ground and pulls a cord to operate the tripping latch to trip the bottom; that is right, isn't it? A. Yes, sir, the two lines I have referred to in no case, except where I say so, refer to the tripping line. And the tripping line, in other words, would always make a third line. That is, I think, what you have reference to.

Q. Now, this is the first model, isn't it, in which you have had a full revolving shovel? A. Yes, sir.

Mr. Corbett: Do you understand that, Your Honor?

The Court: No, I don't.

Q. Will you explain to the Court the difference between your former machine and this full revolving machine? A. Yes, sir. Referring to Plaintiff's Exhibit P-18, for example, and to page 2 thereof, there is shown a machine with boom and stick. The machine is of the type called the non-revolving machine, referring to the fact that the body does not itself revolve when—

The Court: Well, this machine that you had today revolved with the boom.

Witness: That is correct.

Mr. Corbett: It has a cab, or rather a tractor and a cab on that.

Q. It is turned by a gear; is that right? A. That is right. The defendant's structure revolves sidewise a certain degree, whereas in the machine shown today the entire body here revolves upon a suitable structure on the ground mounting for the side swinging.

Q. Now, so that the Court may have the matter clear,—which may have some bearing here—one of the distinguishing features of the full revolving shovel is that the revolving cab carries the boom and the ditcher stick and may be swung to any position around the circle, 360 degrees, for either in front of itself, to the side of itself, or back of the tractor,—any place; is that right? A. Yes, sir.

Q. And your machine previous to this model had how much,—about 180 degrees? A. About 180 degrees of swing.

Q. And in this machine that you had today, for instance in the operation such as undercutting, you would have a great deal more power in swinging the upper end of the boom, the upper end of the stick, than you would in your old machine; isn't that right? A. No, sir.

Q. Are you sure of that? A. Yes, sir.

The Court: Power for what purpose?

Mr. Corbett: Canting the stick to effect the so-called undercutting.

Witness: I can explain that more fully, if you desire.

Q. Now, this full revolving shovel, of course, has been in use for quite a while, a number of years, by other companies. That is true, isn't it? A. Yes, sir.

Q. Well now, in this scoop that you used today, you demonstrated what you call rooting; is that right? A. Yes, sir.

Q. And it is a fact, isn't it, that the side rake teeth on that scoop used today extend down so that their bottom is practically in the same plane with the bottom of the other teeth of the scoop? A. With the tips of the other teeth, yes, sir.

Q. Well now, will you show the Court just how far —well, have you got a picture of that? A. There should be a view in the exhibits showing the revolving machine.

The Court: Well, when the bottom of the scoop is in place they are practically in alignment, aren't they?

Mr. Corbett: Yes, practically in alignment. Well then, Your Honor, you remember that?

The Court: Yes, I remember that distinctly.

Q. Now that tooth,—that side rake tooth which you had used on there, is that tooth shown in the fourth Downie patent and which has been withdrawn against the Osgood Company? A. It isn't the exact shape of tooth, but it is substantially the same.

Mr. Corbett: Have you got a picture of that tooth, Mr. Richey?

Mr. Richey: Why, there is one, I think, in that pamphlet that you just had,—Exhibit 24, was it?

The Court: Yes; P-24.

Mr. Richey: Is it shown in there?

Mr. Corbett: It doesn't show it very clearly.

Mr. Richey: I think that is it.

Mr. Corbett: Well, we will go on with that.

Mr. Richey: I don't know,—we may have a better view of that.

The Court: I can see it here. I don't know whether it is clear enough for Mr. Corbett's purpose.

Mr. Corbett: Here is a good view of it, in Exhibit 21.

The Court: Exhibit 21?

Mr. Richey: Yes, sir.

The Court: Yes; right under the one that has 1927 pull scoop.

Mr. Richey: Ask him about it. See if that is the right one; I don't know whether it is or not.

Q. Mr. Downie, I am talking about this side rake tooth; this is the one? A. Yes, this is a side rake tooth on what we call our 425; not the one that you saw today, however.

The Court: This is different?

Witness: Yes, this is different.

The Court: In what respect?

Witness: The tooth edge is slightly curved in this way, so that it would produce a slight troughing in the floor of the trench, whereas in the machine you saw today the floor of the trench will be flat.

Q. Have you a patent on this that you used on there?

Mr. Richey: I object to that as immaterial.

The Court: I don't think that one question will hurt you.

A. We have no application on file at this date.

Q. You think it amounts to invention, do you?

Mr. Richey: I object.

A. It is a matter for counsel to determine. I have no opinion on that.

The Court: One war at a time.

Q. What is this model, Mr. Downie? Has it a number? A. Model 17, this machine you saw today.

Q. How many of those machines about have you put out? A. I believe four or five; something of the kind.

Q. Now, I notice that there are several differences between the machine demonstrated out there, and the machine shown in this Exhibit, Plaintiff's Exhibit 24. For one thing, there seems to be in the machine demonstrated what appear to be two stops on the inner side of the ditcher stick; that is, that side nearest the boom. What is the purpose of these stops? A. The purpose of that is to limit the approach of the stick to the boom.

Q. What for? A. In order to prevent straining the hauling line wedge socket into the sheave located upon the boom.

The Court: Is that what you referred to as the bridge out there today?

Witness: No, it is not located on this here, but located in approximately this position on the machine that Your Honor saw there. It has two prongs—

Q. Is this it? A. Yes, this illustrates the approximate position of the structure referred to.

Mr. Corbett: Now, I want to identify that.

Q. Did you have trouble with the bending of those links on the top of the stick that caused you to put these stops, or either of them, in? A. No, sir.

Q. Or breaking of the links? A. No, sir.

Q. Well, you first put this machine out without them. Why did you decide you needed them? A. We put them on to prevent the bail from being strained from the inner side of the boom, the bail on the top, and to prevent the wedge socket there necessary for commercial use, and to stand the power of this machine from being strained up into that sheave.

Q. It isn't quite clear to me how the bail—I understand the bail that you are talking about now is the hauling bail? A. That is right.

Q. That is connected with the front of the scoop?

Mr. Corbett: This is the bail he is talking about. Now I call that to Your Honor's attention, because he has got another bail that sets up here (indicating).

The Court: This is the hauling bail?

Witness: This is the hauling bail. The matter to which I have referred is this. The part I am indicating, the wedge socket, formerly was drawn up into the boom to such a point that it contacted upon that sheave before this bail struck the under side of the—

The Court: Well now, you want this in the record, don't you?

Mr. Richey: I don't care anything about it, Your Honor.

The Court: Well, somebody will want it in the record, and you haven't got it in here now.

Mr. Corbett: We would like to identify this sketch, and perhaps I will have him put some humerals on there, —Defendant's Exhibit 61 for identification.

The Court: All right.

Q. Will you take this sketch, which is marked Defendant's Exhibit 61 and place on it numerals and lines indicating the two stops on the inner surface of the ditcher stick, designating the first stop A and the second stop B, and then tell what they do? A. There is on the machine we saw this morning a stop which I am numbering 1.

Mr. Richey: What does this sketch show? What does it represent,—any machines we have been talking about?

Mr. Corbett: Well, it is a rough sketch of the machine you demonstrated out there this morning.

Mr. Richey: Well, I don't know; if it is, you better prove it. I object to the question as immaterial until he shows it.

Mr. Corbett: You haven't put in any picture of your machine out there that is complete, and we are just trying to get a full view of the machine.

The Court: Is this an accurate representation, so far as it goes, of the machine as it was demonstrated today?

Witness: It represents the machine, recognizable to me. I don't remember the dimensions accurately; but it is recognizable to me.

Mr. Corbett: I just want to get the differences between your machine and the catalogue; I want to get what those differences are.

The Court: Well, in that connection, Mr. Downie, you said that was model 17 out there.

Witness: Yes, sir.

The Court: And the picture, and Exhibit P-24, are also what seem to be model 17?

Witness: Yes, sir. The one is with the ditcher attachment; the other is with what is called the skimmer attachment, but the model number refers to the basic machine, that is, the structure comprising ground mounting and the revolving cab, power plant, and so forth.

Q. In other words, you sold the machine equipped with a skimmer scoop, a skimmer attachment, and a backboard attachment; is that right? A. That is right; or a crane, boom for clamshell or dragline. The second stop illustrated on the sketch presented to me I am marking 2.

The Court: That is Exhibit what?

Mr. Corbett: Defendant's Exhibit 61, marked for identification.

Q. What is the purpose of the stop 2? A. The purpose of the stop 2 is to serve for a contact with the hauling bail when in the outreaching position, and when the bail is sometimes caused to strike rather heavily against the stick.

Q. Are there any other changes present in the machine demonstrated from the machine of this catalogue Exhibit P-24? A. I do not know of any other details, except one that I have mentioned,—the fact that the scoop is of a little different width, I believe, from the views in that bulletin.

Q. And you have changed the shape of the side rake tooth? Is that right? A. No, sir; the side rake tooth is the same.

Q. But the side rake tooth is different from the side rake tooth of Downie patent No. 1,716,432; is that right? A. That is the fourth Downie patent?

Q. Yes. A. Substantially the same. The dimensions are not the same. The two teeth are not interchangeable on the same scoop and with the same bolts. We have lengthened the distance from the bottom pivot to the bail pivot since it is a larger scoop.

Q. Well, you are speaking of the scoop. A. Yes, sir; the ditcher scoop of the model 17 is larger than the scoop which was offered commercially at the time this patent drawing was made.

Q. Yes, but I am talking about the side rake tooth. A. Yes, sir.

Q. That is different from the tooth on this model 17. It is different from the tooth of the fourth Downie patent; is that right? A. No, sir, I don't believe it can be said to be different, unless I have a better definition of what difference means. The function of it is the same, and the two forms of tooth, that is, our commercial form prior to that used on the model 17, and the form shown in the patent and the form of tooth used on the model 17 are all so closely alike that unless one measured very closely they wouldn't know that they are different teeth, and all of their functions are exactly the same.

Q. Doesn't one of them extend down longer than the other? A. The model 17 tooth extends forwardly and downwardly a little further than the previous commercial tooth and than that shown in the view of the scoop in the patent.

Q. Well now, directing your attention to the second Downie patent, No. 1,543,250, I will ask you if it is not a fact that the side rake teeth 27 as shown in Fig. 2 of this patent—

The Court: What number is that now?

Mr. Corbett: 27.

The Court: In Fig. 2?

Mr. Corbett: Yes, sir.

The Court: Very well; I have it.

Q. (continuing)—doesn't assume an entirely different form from the tooth which was used in the demonstrating machine,—the side rake tooth that was used on the demonstrating machine? A. There are no numerals in my copy of that patent referring to side rake teeth. You said the second Downie patent, which is the heel patent. Are you referring me to that?

Mr. Corbett: I should have said the first Downie patent.

The Court: You said the second.

Mr. Corbett: That is my error. That should have been the first Downie patent, No. 1,511,114.

A. The form of those teeth as shown here is different from that used in the demonstrating machine.

(Narrative continued.) The side rake tooth shown in the first Downie patent terminates quite a substantial distance above the teeth of the drop bottom. It terminates at a higher point in the drawing of the patent. I do not find anything in the claims or specification that these side rake teeth were usable for rooting. The only reference to the function of the rake tooth, or that I can locate immediately, is that beginning at the top of the first column of page 3 of the specification, reading, "The bottom 25"—

The Court: What line?

Witness: Line 2, Your Honor.

A. (continuing)—"of the scoop is furnished with digging teeth 26 of appropriate shape fixedly secured to the bottom, while side rake teeth 27 are made fast to sides of the scoop body above and in front of the bolts 28, protecting said bolts from the effects of the material into which the scoop enters."

Q. Do you consider the function of rooting of as much importance as the function of protecting the pivot bolts? A. The function of getting clearance for the pivot bolts is imperative. It is simply indispensable. The matter of rooting is a utility added to the other utilities.

Q. You would say, then, that the matter of rooting was a comparatively minor feature, would you? A. No, I wouldn't say it was minor. I would say it was necessarily subordinate to the major function of permitting the scoop to pass through the material.

Q. But you consider that an important feature, do you? A. Yes, sir.

Q. But you do not disclose it in this patent? A. No, sir.

Q. Have you disclosed it in any of the bulletins that you have issued? A. We have employed it. It may be referred to.

Q. Will you look up tonight and see the earliest bulletin you can find which has that? A. It may be possible to locate something of the kind.

Q. Well, you will make the effort to locate the earliest one that you can, will you? A. I will endeavor to find some such reference, if there is anything in our catalogues which we have here. Of course, we don't have all of our sales literature here.

Q. Well, you have all your standard catalogues here, haven't you? A. But we have issued many bulletins and catalogues besides what we have here, and a number of direct mailing pieces—several dozen of them.

Q. But they are not your standard catalogues, are they? A. They are our regular advertising piece.

Q. Well anyhow, you look over what you have. A. I will look through what catalogues are here.

(Narrative continued.) I will explain to the Court the various methods of discharge that are used with this drop bottom bucket structure. There are two methods of discharge used with this machine, the one, a spot discharge in which the bottom is tripped so that the material will fall out, and the second type or kind wherein the scoop is allowed to swing out to its outreaching position or nearly to it, and in which the material falls out of the mouth of the scoop. In practically all operations in which the spoil is thrown out onto a pile, it goes out of the mouth of the bucket, the same end that it went in. The distance of the spoil pile away from the excavation would vary with the jobs according to the amount of material. In dumping on a spoil pile ten feet high, you would swing the stick upwardly while swinging the machine laterally and the bucket past the sweep of the spoil pile and deposit it on top of the pile. In a pile ten feet high, the pile would be ten feet away from the edge of the machine practically. As to whether they ever trip the bottom of the bucket in throwing it out on the pile, they will, if they desire to throw the material further than they are doing by the simple discharge with our machine; they let the bucket run out rapidly and trip the bottom at the right instant, and it is possible to throw the material beyond the slow motion reach of the machine.

The width of our machine made prior to this full revolving cab machine was ten feet, that is on the crawler, or whatever it may be,—the outermost point of it,—I believe the axle. The boom is pivoted in the center. The customary height of wagons into which the spoil is dumped is five feet or thereabouts. In dumping spoil into a wagon, even with the drop bottom bucket,

it is customary to get the bucket as close to the wagon as you can; it is desirable to place the scoop rather low to the wagon.

Q. Well, will you explain in these Byers demonstrations which you made—these are pictures showing a boom elevated,—this is in Plaintiff's Exhibit 19. You have a scale there, I think, in which you showed that. On 15-B the scoop is shown at an elevation of ten feet; isn't that right? A. 15-B? Is this B, the first view?

Q. Yes. Look on the back and see. A. Yes, clearing nine feet or ten feet.

Q. And in the 15-E you show it a little over twelve feet; is that right? A. Yes, sir.

Q. Now, I understand the situation you are attempting to show by these two photographs, that you had a blind spot in dumping; is that right? A. Yes. They illustrate the utility of the heel, and that there is a blind spot in dumping.

Q. Now, with a machine of this type, which is a 180 degree machine, you are digging right to the front of the machine, aren't you? A. Usually. Of course, in cellar digging you may be digging to either side, but normally, yes.

Q. But in the normal way? A. That is the normal way, yes, sir.

Q. And here you show dumping in front of the machine. Well you can't dump and dig in front of the machine, can you? A. It is not possible to place a conveyance for dumping the bucket immediately in front. This, of course, was a machine closed for the purpose of showing these elevations of the boom, as is indicated further by the fact that the hauling line is disconnected from the scoop. This was not a practical job.

Q. Well, but you were trying to show that the blind spot occurred in the normal cycle of the machine, weren't you? A. No; we removed the bolts in certain of these views.

Q. Well, all of these views show them in ten or twelve feet heights, don't they? A. I believe not. The first view shows a clearing of nine feet.

Q. When the wagon is five feet? A. Yes, sir.

Q. And you are showing a view in front of the machine; is that right? A. These are not placed—the scoop is not here placed with reference to the height of the wagon, but with reference to whatever may be—well, simply at a certain height.

Q. Weren't you trying to show that court that the blind spot occurred in the normal cycle of operation of the machine? A. Well, there would be jobs in which the elevation of the scoop to this height would be in the normal cycle of operation.

Q. And you would be having a wagon in front of the machine and dumping from an elevation of nine feet? A. We did not intend to imply that the thing was limited to the placing of the wagon directly in front of the machine.

Q. Where would you have your wagon? A. More to the side. You could place a wagon right in this position, but normally the wagons would move along side of the machine.

Q. Now, with the wagon moving along side of the machine—how wide are the wagons? A. Oh, five feet.

Q. And it is five feet, as I understand, from the center of the machine to the outside of the crawler? A. Yes, sir.

Q. And then it is at least two and a half feet to the center of the wagon? A. Yes, sir.

Q. And the normal and natural way is to get your drop bottom scoop right over the center of the wagon; isn't that right? A. Yes, sir.

Q. Therefore your scoop would have to be seven and a half feet from your pivot in the first place, if you turned to the side; isn't that right? Where are you going to put the wagon? I will ask you that question first. A. Put it right along side of the machine, at any convenient position.

Q. Well, you can't put it back of these posts, can you? A. Within our spotting range.

Q. Well, what is your spotting range? A. 180 degrees.

Q. Well, if the rear hub of your wagon is put opposite to the front of your tractor—that is the practice, isn't it? A. The rear hub of the wagon? It would depend on which way the wagon is headed.

Q. Well, don't let us quibble about the matter. A. I do not desire to quibble.

Q. Tell me where you put that wagon in the normal operation? A. We would place the wagon somewhere in the loading area, and where the roadway was suitable for it, and where we would bring the scoop into proper relationship for discharge into the wagon.

Q. Now, in the scoop as you have shown it here, if you had your wagon—we will say this is your machine

here, and this is the front end of the tractor. Now you have your wagon, we will say it is facing forward. You have your wagon with the rear hub about opposite the front end of the tractor,—of the traction member; is that right? A. Yes, sir; I understand the position referred to.

Q. Would that be the proper position? A. That would be a proper position, yes, sir.

Q. All right. Now if you had it much back of that, the operator who was unloading the spoil would have difficulty in seeing where the spot is low because of the side pieces on your cab; isn't that right? A. Oh, it is true if the wagon were back far enough so we couldn't reach it, then we couldn't dump the material into it. If you are referring to this, there is some little interference with visibility, perhaps in our A frame, if the wagon is placed on the right hand of the blind spot as we refer to it in the machine. And for that reason we normally place the conveyance on the left hand side of the machine, where it is in the full view of the operator, if the work permits.

Q. Will you explain to me just why it was that in trying to demonstrate this blind spot to this court at Cleveland, that you attempted to demonstrate the shovel in front of the machine? That is kind of hard to understand. A. I am afraid there is a misunderstanding about it. The blind spot to which we have referred in all of this litigation refers to the in and out range of the scoop throughout the entire 180 degrees of swing. It is a figurative use of the word "blind." It doesn't refer to the fact that the operator's vision is obscured with reference to a five or ten degree sector of its 180 degrees.

Q. I know, but that is changing the subject a little. Let's address ourselves to the question of the blind spot, as to whether or not these machines, or these pictures show the machine in the operating scale. These shovels as shown here are too high for dumping; is that right? A. No, sir; they can be dumped at that height.

Q. Didn't you say that the object was to get the shovel as low down to the wagon as possible? A. It was you that made the assumption that the wagon was setting on the same plane of the machine, not I.

Q. Well, you had a five-foot wagon. A. Yes, sir.

Q. And you want to get the shovel down practically touching the wagon, don't you? A. The scoop touching the wagon, yes, sir.

Q. These here put it up to ten or twelve feet high? A. We didn't set it with the wagon along this scoop. I haven't said, and would not wish to be understood as saying, that we would dump into a wagon from a height of twelve feet; in a wagon five feet high it wouldn't be desirable. If the wagon is placed on a higher plane than the plane in which the machine operated, that elevation might be used.

Mr. Richey: Mr. Corbett, did you understand that this was a demonstration at Cleveland before Judge Westenhaver?

Mr. Corbett: That is my understanding.

Mr. Richey: No, that is not correct. That was made at Beaver Falls, wasn't it?

Witness: Yes, sir.

Mr. Corbett: Well, they were used in evidence in the Byers suit.

Mr. Richey: I think we used them in evidence, but that was not a part of the demonstration before Judge Westenhaver.

Mr. Corbett: No, but it was an illustration of that reference to the blind spot.

Q. Now, as I understand this matter, you were seeking to keep your machine in its normal operation from getting to a position where it could not be thrown out; was that right? A. We were seeking? Does that mean—

Q. When you introduced the abutments, and that was the purpose of the proposition? A. Oh, yes, sir.

Q. And when you have your wagon on the side of the machine, we will say, for example, if you had your wagon directly to the right of the pivot, which would have to be seven and a half feet,—the center pivot of the boom—it would have to be seven and a half feet below the pivot of the boom—your scoop to be dumped would have to be seven and a half feet approximately from that pivot in order to get it above the wagon into which it was to be dumped; isn't that right? A. Yes; if the center of the wagon was seven and a half feet from the center line of the machine, then the scoop to the center load of the wagon would have to be seven and a half feet from the center line of the machine.

Q. Now this, I take it, is a pretty good scale that we could use here.

The Court: Have you those marked as exhibits?

Mr. Corbett: They are Plaintiff's Exhibit 19, yes.

The Court: All of them are Plaintiff's Exhibit 19?
Mr. Corbett: Yes.

Q. In the first one, in 15-E, can you say what the distance is from a vertical plane through the pivot of the boom? Measure by the scale shown in these photographs, and give an approximate estimate of the distance from the point of this scoop to the vertical plane through the lower pivot of the boom. A. Estimating as you have indicated, the distance would be approximately five feet, plus three,—eight feet; and from the pivot—

Q. Just measure it from that scale. A. Now you desire this measurement to be made from the pivot of the boom here?

Q. From the vertical plane. A. Vertical plane passing through the pivot of the boom?

Q. Yes. What is your answer? A. The distance from the vertical plane of the boom's axis, to what point now?

Q. To the point of the scoop. A. To say the middle of the scoop—

Q. Well, you can say the middle. A. —would be approximately six or six and a half feet.

Q. And then if you turned this scoop to the side and attempted to dump into a wagon in its normal position you would have to get that scoop out considerably further; is that right? A. Somewhat further. Of course, turning the scoop to the side, it would not revolve upon an axis in the plane of the boom pivot. You understand this is the axis of the vertical movement, and our side swinging occurs upon another axis located further toward the rear than this.

Q. Yes. A. Which would of course increase by so much.

Q. Yes, I understand it is on a turntable, but the point is, when you get it turned around to the side, you are going to have your scoop,—in order to effect any dumping at all, you have to have seven and a half feet or eight feet from the plane of the pivot; isn't that right? A. It would be, if swung to the side here, perhaps eight feet from the center line of the machine to the mid region of the scoop.

Q. Well, then this does not represent any normal cycle of the machine, does it, in operation,—dumping of the load. You have to get it down some, anyhow? A. Yes, sir.

Q. You will have to get it ten feet away from that pivot, won't you? A. You would normally have to get

it ten feet up unless there was a retaining wall immediately adjacent the machine and the wagon or truck setting on top of the wall. However, this view that you have shown, the abutments are not in use, so you see the scoop is behind the blind spot.

Q. Yes, but you wouldn't need the abutments. If you had it lower or further out, you wouldn't have to bring it in your blind spot that you are talking about; isn't that right? A. No, but suppose you are placing it in a wagon outside of this elevation and further out.

Q. But you said you would never want to place it into a wagon from an elevation of five feet high? A. No, I didn't say anything so broad as that. We frequently put the wagon on a plane higher than that in which the machine is standing, but in such place, of course, we need the heels in order to get the scoop out to the wagon at the higher elevation.

Mr. Richey: Some times you dump into trucks, too, don't you?

Mr. Corbett: You are not testifying, are you?

(Adjourned to 9:30 A.M., Thursday, March 5, 1931.)

(Hearing resumed on March 5, 1931, 9:30 A.M.)

CROSS EXAMINATION OF WITNESS, REX R. DOWNIE, RESUMED by Mr. Corbett.

Q. In order to clear up the record, Mr. Downie, in your direct examination you stated on several different occasions about a commercial machine offered by your company from 1913 to the present time. This statement particularly appears on page 88 of this record, and at another time in the record you said that Clutter came to your company in 1912, and that your company became interested in the development of his machine. It is a fact, is it not, that prior to May or June, 1914, your company made only skimmer scoops, that is, in the line of excavating machinery, and if you are claiming any use of ditcher scoops of the Clutter patent it was at least subsequent to April of 1914; isn't that right? A. Beginning and subsequent to that; that is correct, sir.

Q. And as far as that question of any operation of the machine at Conway, Pennsylvania, is concerned, which you have possibly suggested might have been done, you have no actual knowledge about that, and you are merely speaking from hearsay; isn't that right? A. I am speaking merely from company records. I was not present at that work.

Q. Now, with regard to the third Downie patent, which we call the assembly patent—that is, No. 1,709,466, I notice in speaking of that structure, or similar structure, at the demonstration yesterday you spoke of the feature of a single ditcher stick constructed to fit a plurality of widths of scoops. Now, you recognize, don't you, that quite a time before your filing of that assembly patent, it was old to provide sticks of standard size and a series of buckets or scoops of different widths which would fit that same stick and could be attached to it; isn't that right? A. In substance, that is correct. The broad utility of having an interchangeable stick was used by us prior to this patent.

Q. Not only used by you, but used by a number of companies, wasn't it? You will admit that in the excavating industry, considerably prior to the filing date of that patent it was old to use interchangeable scoops on a standard ditcher stick? A. Well, as to the use by others, I am unable to say.

Q. Well, you are not making any claim of novelty of that feature in this patent, or any of these patents in suit; is that right? A. Not novelty in that *per se*, but only in the preservation of that utility in this structure.

Q. Well, you mean by that your particular form of connecting means. That is all you are claiming in this structure? A. That is correct, sir.

Mr. Richey: In this case, of course.

Mr. Corbett: Yes, in this suit. I assume we are not talking about any other.

Q. Did you find any catalogues in which the features of striking a gravity blow or rooting were disclosed; that is, a catalogue of the Keystone Driller Company? A. I looked through yesterday evening the catalogues which we have here offered as exhibits of our machine, but do not find this part of the operating technique explained.

Q. That is, the feature of striking a gravity blow? A. Yes, sir, the method, or how to execute a gravity blow, how to execute the rooting operation.

Q. Neither one? A. Neither one is, so far as these catalogues show, described. It should be said that these catalogues are mainly contact pieces and leads, and I believe the technique is disseminated more by word of mouth by the demonstrator than the salesmen.

Mr. Corbett: Well, I object to that. You don't have to go on and on when you answer a question. Just answer it, please, and stop.

Witness: Yes, sir.

Q. Now, regarding the question of the period from 1912 to 1920, or the latter part of 1919, as I understand it you were only at the plant about three months a year, that is, working there? A. That would be correct.

Q. And so you have no actual knowledge as to the number of back hoes that were sold during that period; isn't that correct? A. If actual knowledge means having counted them personally, no, I do not have actual knowledge.

Q. In the machine which you demonstrated yesterday, during the digging operation the dirt was continually spilling over the top of the scoop at every digging stroke, so that at every digging stroke you lost a proportion of what you actually dug; isn't that correct? A. No, sir, the dirt would fall over the end wall of the scoop if the operator pulled the scoop sufficiently far and had a sufficiently large load; but "continually" is over-emphasizing it, and it did not occur at every stroke. However, it is true that when loaded heavily, and if pulled up far enough towards the boom the dirt may fall over the end plate.

Q. That is quite a marked disadvantage, wouldn't you say? A. No, sir.

Q. Well, would you say it was an advantage? A. I would say it was an advantage, since the weight thereby saved more than offsets the loss of material. As experienced designer of the scoop, I think that it is no disadvantage.

Q. You say that the weight thereby saved— A. Yes, sir.

Q. Will you explain that a little more, please? A. I believe that the weight saved by not boxing in the top of the scoop is of more worth than such spillage of material as occurs by lack of the plate.

Q. You consider that an advantage rather than a drawback? A. I consider that it is a neutral point.

Mr. Corbett: Now, if Your Honor please, in view of the fact that this witness has indicated that he has no actual knowledge, either regarding the money paid by way of royalties or otherwise, for these patents in suit, or any of them, and that he has no actual knowledge regarding the number of machines, number of back

hoe attachments, sold from 1912 to 1919, inclusive, we move to strike out all testimony relating to that matter.

Mr. Richey: If Your Honor please, both of these points are merely make-weights on the question of invention; the exact amounts are immaterial. The witness knows of his own knowledge that the machine has been a commercial success. As to the exact numbers he perhaps does not know, but that is immaterial; and the same thing applies, of course, to the money paid. As an officer of the company, he knows a substantial sum was paid, and that large numbers of these machines have been made and sold and put in use.

Mr. Corbett: Your Honor, we think that this case should be tried on the basis of facts, instead of on the basis of speculation, and where a witness admits that he has no actual knowledge of those facts, we believe the testimony should be stricken out.

The Court: I think your objection goes to the weight of the testimony; the motion will be overruled.

Mr. Corbett: Exception.

The Court: He is an officer of the company?

Mr. Richey: Yes, sir.

The Court: An officer of a company does not have to know everything that is going on in order to be able to give some idea.

Mr. Corbett: That is all, Your Honor.

RE-DIRECT EXAMINATION by Mr. Richey.

Q. Mr. Downie, you were asked about the catalogues of your company and about their disclosing certain functions of this machine. Will you explain just what is the purpose of these catalogues that are issued in your industry?

The Court: I suppose on that, Mr. Richey, the catalogues speak for themselves, don't they?

Mr. Richey: Well, this is not like selling soda, where a man just buys it by the box, but the catalogues just introduce it, and then he buys the machine on demonstration.

The Court: I think he has a right to show how this information about striking the gravity blow and this other thing—how that information is disseminated, but on this particular question, the catalogue speaks for itself.

Q. Well, will you answer as the Judge has stated; answer the question how you disseminate the knowledge?

The Court: What is your practice, if there is any, as to telling your customers the various merits and demerits of your machine; I don't suppose you ever talk about demerits, but how do you get the merits to them?

Witness: We do not have any rigid rule in regard to the matter, but the catalogues, in the main, are to show the kinds of work which—

The Court: Well, the catalogues speak for themselves, and anybody can read them and tell what the catalogues say.

Q. In other words, how do you tell your prospective customers about such merits of this machine as striking a gravity blow and rooting? A. The demonstrator on the job explains the utility of the machine, and teaches a man to do it. Is that what you mean?

Q. Yes. That is the practice? A. That is our practice, yes. We demonstrate each machine.

Q. Will you give the court some idea of the area of these blind spots, both in the horizontal and in the vertical? A. That is, the extent of what we call the blind spot?

Q. Yes, the area. A. At the elevation of that machine shown in certain exhibits introduced yesterday, at the elevation of ten feet, I believe it is, the additional outreach gained by the use of the abutments is some three feet; so that distance, radial distance of three feet, as representing a segment of the annulus, would represent the blind spot, at that elevation. Now, at lesser elevations the amount of outreach gained by use of the segment, which would otherwise be blind spot, that marginal zone decreases.

(Narrative continued) Referring to defendant's Exhibit 61, these additional features, such as these abutments, 1 and 2, and the machine rotating 360 degrees instead of 180, in no way affect the function of the machine, that is, the question about the function and the operations included in these patents in suit. A lot of spoil is loaded into trucks that are much higher than wagons.

In addition to the experience I have had with machines in demonstrating them, I have done a lot of work in the testing ground at Beaver Falls on the machines. I have tested them under various conditions and special circumstances.

Q. Now, is this rooting a virtue that is inherent in the machine of the first Downie patent? A. Yes, sir.

Q. Can you produce some marked photographs or sketches that better illustrate the operation in the defendant's machine with respect to the blind spot, and if so, will you do so? A. Yes, sir, I have certain photographs.

Mr. Corbett: I suppose that is not a part of the re-direct testimony.

Mr. Richey: Well, of course, we can put him back on again later in the regular order, but I thought I could cover this with him now.

The Court: Yes, that may not be re-direct, and you may re-cross examine him on that point, if you want to.

Mr. Richey: Or any other subject, so far as that is concerned.

The Court: Well, that is the way I feel about it, too.

Mr. Richey: I mean, of course, with the consent of the court.

The Court: Yes, I will let him cross examine, if desired.

Mr. Corbett: This, Mr. Richey, is the General Excavator or the Osgood?

Mr. Richey: Both of them.

Mr. Corbett: Well, you better take them separately, don't you think?

Mr. Richey: Well, yes, cancel that question, and I will just say, have you marked up any photographs of the General machine to illustrate more nearly the operation of that machine in eliminating the blind spot, and, if so, will you produce those photographs? Now, take those up first, the General.

A. Yes, I now produce two photographs—

The Court: Better mark them as exhibits.

Mr. Richey: We will have them marked as "Plaintiff's Exhibits P-36 and P-37." You can put reference numerals on those parts, if you want to, with pencil.

A. These two views are marked "D" and "E" and correspond to the views "D" and "E" of Exhibit P-27 introduced previously. The photos are the same except that the corners of the structure at the outer end of the boom and the upper end of the stick, and including the bridle, have been outlined or retouched in ink to bring out more precisely the contour of the parts. The shoulders or ledges upon which the bridle contacts are thus

made more apparent in the view "D" and the bridle may be seen to be in contact with the shoulder in the view "E."

Q. That is, Exhibit 36 is "D" and Exhibit 37 is "E"? A. Yes, sir. I should have referred to view "D" inked as "P-36," and view "E" as "P-37."

Upon view P-36 I am marking the letter "A" indicating the point upon the bridle which contacts with a ledge upon the stick, and by another lead line and arrow and the letter "B" I am indicating the point on the stick interengaging with the bridle. Similar characters are on the Exhibit P-37.

Q. Now, I will ask you the same question regarding the Osgood machine, and in that connection I hand you a sketch marked "P-38." A. This is a sketch illustrating roughly the structure of the Osgood machine including the upper end of the stick, the outer end of the boom, the link connecting the hoisting sheaves with the head end of the stick, and is intended to illustrate the Osgood structure shown in various views and positions in Exhibit P-30, and on the sketch referred to, P-38, the letter "A" indicates the point at the upper end of the channel which is built upon the inner face of the ditcher stick, which serves as contact for the bridle, and as a stop for same. The letter "B" leads to the point upon the bridle which contacts with the point "A" on the stick. The various parts are named, such as link, hoisting line, boom, stick, and the channel member of the stick. Also, the line of tension is indicated by a broken line passing through the bridle pivot and extending toward the machine, and intended to terminate at a point equi-distant between the parts of the hoisting line, and the action of the bridle when in its stopped or limited position with reference to the stick is indicated by the fact that the bridle sheaves are deflected above that line of tension.

Mr. Richey: We offer the two photographs and the sketch in evidence as Plaintiff's Exhibits P-36, 37 and 38, respectively.

The Court: They will be admitted.

Mr. Corbett: Your Honor, we would like to object to them until we have a chance to compare that with our structure.

The Court: Well, I will admit them, and if you want to make an objection to them later, Mr. Corbett, you let me know.

Q. In some cases of digging in hard rock, dynamiting or blasting is used in connection with the Clutter machine, or these other machines; that is correct, isn't it? A. Yes, sir.

Q. Now will you explain that operation? A. That is, the operation of dynamiting?

Q. Dynamiting, or loosening the rock first? A. When rock is encountered which is too tedious or difficult to execute without dynamiting, there are holes drilled usually by what are called jack-hammers—that is, an air actuated drill—and charges are placed in these holes, which may be from two to ten or twelve feet deep, and charges are set off to loosen the material, which is then dug out by means of the machine, possibly with further fracturing by the machine, or the charge may entirely fracture the material from its original position, so that there is only the gathering and normal digging operation performed.

Q. Some point was made here during your cross examination about the machine demonstrated not being an exact duplicate of that shown in Exhibit 24, having these additional abutments. Have you some photographs that show that actual machine, in all its particulars, whether they relate to the movements here or not? A. Showing which actual machine?

Q. The one we demonstrated yesterday, over in Mr. Davis' coal yard? (photographs handed to witness) You don't know whether that is the same machine or not, but is it the same type? A. I have here photos of precisely the same type of machine.

Q. Showing the abutments in that Exhibit 61? A. Yes, sir.

Mr. Richey: I offer them in evidence as Plaintiff's Exhibit P-39.

The Court: We will admit them.

Mr. Richey: I don't suppose Your Honor cares to see them; you saw the machine.

The Court: No.

Mr. Richey: That is all, gentlemen.

Mr. Corbett: That is all, Your Honor.

Thereupon the plaintiff, further to maintain the issues upon its part, called as a witness in its behalf EDWARD M. MORRISON, who, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Edgerton.

My name is Edward M. Morrison. I am thirty-one years of age. I reside at Akron, Ohio. My occupation at the present time is subcontractor, but operating my own shovel. I have been engaged with my own outfit five years this month, about. I have been an operator, practically nothing else, the biggest part of ten years. I am familiar with various types of excavating machines. I have been operating in Cleveland, Youngstown, Akron, all around that section, through the country. As to the type of soil or ground that has been encountered in that district, I will tell you—you strike all kinds of stuff. You get sand, rock, shale and get what we call layers of flint rock, and practically all kinds of stuff, from quicksand up and down. As to the type of shale and flint rock, it runs different in different sections, but ordinarily when you strike shale—not ordinarily, but part of the time where you strike shale, you will get what we call a layer of flint rock in it, maybe several layers in it, before you get to the destination you are going, the depth you are going, and this flint rock runs in layers in places from—oh, an inch to four or five or six inches, like that, and sometimes thicker; but it is hardly ever any thicker than that.

I am operating a Keystone machine right at present. I have had occasion a number of times to dig that material. The Keystone excavator has a back hoe attachment. I have in excavating through that type of material to which I have referred used the gravity blow on it, or we can use what I call the power blow on it. By the power blow, I mean when you raise your bucket a certain height, whatever you feel is safe to use on the machine without wrecking it, the way I do, on an average of about two feet or three feet, and release my holding line which is the boom line, and on my power line, which has a drag line on it—I always call it a drag line—by taking up on the drag line or loosening the boom line and grabbing the drag line, puts what I call a power blow. By doing that it forces the blow on the teeth, gives them a jerk that forces it in. It is common practice to go through that kind of material that way, that is, with that kind of machine. I never was employed by the Keystone Driller Company.

I have used an instroke machine going through this shale, etc., and using the gravity blow where I have had an opportunity to compare with the outstroke dig-

ger, and to ascertain the differences between the mode of operation and the effect of the work done by the machine, and my observation is that there is no way that you can put a power blow to the outward machine. I have found that one will go through where the other will not. In working in the city, I have gone through such materials as pavements with a back hoe or gravity blow machine, a number of times. My experience with this kind of material is that there is times you get pavement that you don't have an air compressor to cut through the things like that, and you use the chopping effect, or picking effect of the Keystone bucket, or Keystone machine, and you can cut your way through. This I have done. I have undertaken a contract where the owner requested me not to do any blasting or to limit the blasting, and where the material was of a hard type and you had to use the gravity blow. It happened just last fall, digging up to Cleveland Farms, and the Cleveland Sanitarium. The superintendent of it asked us if, or told us if there should be any possible chance to cut through without any blasting, he would be glad for us to do so, for they had lots of patients in shape that they might go any minute on anything like that, and we told them that we would do the best we could on it. Of course, we got in places that we did have to use a couple shots, but we held it down all we could cutting it through the sandstone that we had, and they were very well satisfied.

I have used the Keystone machine of the back hoe type quite often in undercutting. The advantage of that is when you are working around trees or poles, or there is times you get a stone, or what we call a niggerhead, a large niggerhead in your ditch that you don't feel as if you want to take several yards of dirt to get at, and you cut around the edges of it and go under as far as you need to, if you can reach that far, and cutting around poles or trees, you can set your machine at least a foot to two foot off the line and still get anywhere you want to.

Cross Examination by Mr. Corbett.

Q. Have you ever operated an outstroke shovel, Mr. Morrison? A. Very little.

Q. Well, you are not in a very good position to say, then, just what you can do with the outstroke shovel in comparison with the instroke shovel? A. I have worked around them; I have seen them quite often working.

Q. Did you ever operate any other shovel than a Keystone back hoe? A. Yes, sir.

Q. What kinds? A. I have operated Marions, Bearcats, and Orton-Steinbrenner—oh, several different makes; I couldn't name them all.

Q. This undercutting that you speak of, was that done with the Keystone machine? A. It was.

Q. Well, what was the model of that machine, do you know? A. Model 4.

Q. Is this the type of machine that you did the undercutting with; is that the same machine? (Referring to Plaintiff's Exhibit P-21.) A. Yes, all except the cab. They built them without the cabs, the one I see.

Q. What do you mean by that? A. Well, instead of having the enclosure on it, they had the curtains. It is practically the same machine.

Mr. Corbett: The exhibit referred to is Plaintiff's Exhibit P-21.

Q. Just what is your operation in undercutting with this machine; how do you go about it? Do you make any special preparation for that? A. Well, it all depends how deep you have to go with your undercutting, the way I figure it. If you cut in—say that I figure in going around a tree, I will start my undercutting before I get to the tree, and by the time I get there I am in line with it, or where I should be.

Q. Just how do you do that? A. By twisting your boom over, and your bucket stick.

Q. How do you do that—by turning ropes, cables? A. Cables, swings.

Q. By the swinging cable? A. Yes.

Q. In this Keystone machine, do you always dig in front of the machine, or practically always? A. Well, unless you are digging a basement, or something, with your hoe back you do; but there is times you want to make a wide reach to the right or left of you, you can swing over.

Q. But your usual way of digging is in front of the machine? A. The usual way in ditch work is straight in front of you.

Q. In this flint rock that you speak of, it comes in layers; is that right? A. It comes in layers, yes.

Q. And how thick do you say those layers are? A. They run anywhere from two to four and six inches, sometimes you run into it.

Q. Have cracks in the layers as a rule? A. They do, usually, and also the shale between the two.

Q. And what you do really is to get your point of your teeth of the back hoe in one of those cracks and pull it up; isn't that right? A. Well, if you get yourself so you can get your teeth in, if there is any possible chance of getting them hooked, but if not, you stand there and chop it out.

Q. And how far down does this flint usually occur? A. Well, it is hard to tell about it; it runs different in different places.

Q. Where was it that you dug flint? A. Oh, I have dug it a number of places—Akron, Youngstown, Cleveland—

Mr. Corbett: That is all, Your Honor.

Thereupon the plaintiff, further to maintain the issues upon its part, called as a witness in its behalf Robert C. Sessions, who, being first duly sworn, testified as follows:

Direct Examination by Mr. Richey.

My name is Robert C. Sessions, and I live in Cleveland, Ohio. I am employed, or rather my occupation is that of a consulting engineer. My qualifications that enable me to testify as an expert in this case are as follows: I attended Wooster Polytechnic Institute, and graduated with the degree of Bachelor of Science; after graduation I had a scholarship for one year's study in engineering in Sweden. After that I was engaged in consulting engineering in Cleveland with my father, Frank S. Sessions, for about five years; then for the next five years I was connected with Steel & Tubes, Inc., at Cleveland, in various engineering capacities, and was for some time general engineer in charge of the entire engineering and experimental development work of Steel & Tubes, Inc. Since June of 1930 I have been again associated with my father, Mr. Frank S. Sessions, in the practice of consulting engineering. My work has involved general engineering matters of all varieties in connection with the designing of machinery, the handling of equipment and machinery, and in connection with that work I have had a great deal to do with patent matters. I have testified in patent cases; I have studied patents and made numerous reports on patents throughout the past ten years.

I have examined the drawings and the descriptive part of the patents in suit here, and the catalogues showing the plaintiff's commercial machine and the defendant's machine, and the other exhibits that have been offered in evidence here. I have heard Mr. Downie testify regarding these machines and their operations and results.

Q. Will you state whether you do or do not agree with the descriptions he has given of these machines and their operations and their achievements, and with his opinions regarding the same? A. I agree entirely with Mr. Downie—

Mr. Corbett: We object to that.

Mr. Richey: In view of the attack that apparently is going to be made on the credibility of Mr. Downie's testimony, we felt that he ought to be corroborated all along the line, and I didn't want to go over all this matter in detail with Mr. Sessions.

Mr. Corbett: Well, you don't want to put the burden on us of going over it either, do you?

Mr. Richey: No; but I wanted the court to know the purpose of that particular question. It may be unusual, but it obviates going over all of that expert testimony.

Mr. Corbett: Well, I assume that these experts will O.K. each other, but that is certainly going some, to take a day and a half's testimony, and have him say that he O.K.'s all that testimony. He hasn't even shown that he knows about these machines.

Mr. Richey: Well, let's ask him that, then.

Q. Have you seen these ditching machines operate? A. Yes, sir.

Q. Which ones? A. I have seen the Keystone machine operate, and the General machine operate, and I have seen—to my knowledge I have seen the machine of the Northwest Company operate—

Q. Well, just those involved in this case. A. But as far as I know, I have never seen an Osgood machine in operation. I may have seen it before I became involved in this case, and was not noticing the names on the machines.

Q. You have seen the General machine operate? A. Yes, sir.

Q. And you have seen the Keystone machine operate? A. Yes, sir.

Q. And you have seen the one demonstrated yesterday? A. Yes, sir.

Mr. Corbett: I object to Mr. Sessions testifying about the comparative operation of the Osgood machine with the Keystone patent, when he has never seen an Osgood machine in operation.

The Court: Oh, I guess Mr. Richey realizes he is not qualified on that.

Mr. Richey: He has qualified, Your Honor, as an expert engineer and mechanic; he knows how the thing would operate.

The Court: Yes, but he doesn't know anything about the Osgood machine, and certainly is not in any position to testify about the Osgood machine, on his own statement.

Mr. Richey: Well, we will take the testimony, then, with that ruling.

Witness: I have seen an Osgood machine, but I have never seen it operate. I have seen the parts of the Osgood machine.

The Court: I don't think that would qualify him; you certainly would not ask the court to put much reliance on his testimony about the Osgood machine under those circumstances.

Mr. Richey: Well, I am glad to have that view of Your Honor, because I am certain the other side will bring on a number of experts to show how these other machines have operated, that never seen them operate.

All right; that is all I have to ask you.

Mr. Corbett: We object to that broad question, absolutely; we don't think he is qualified to say that what Mr. Downie has said regarding the questions of infringement of these patents by the Osgood machine—that is included in that question—It is a question to the effect, have you heard all the testimony that Mr. Downie gave, and do you agree with it?

Mr. Richey: No, that isn't it. I didn't ask him about that. I asked him about the expert testimony that Mr. Downie gave.

Mr. Corbett: Well, the facts are mixed up with the question.

The Court: I wish you could make that short cut, Mr. Richey, but I don't believe you can.

Mr. Richey: Let us ask it this way:

Q. Mr. Sessions, basing your opinion upon the observations that you have made of these Keystone and General and Osgood machines, and on your observation of the operation of the General and Osgood machines,

and on your general engineering knowledge, do you or do you not agree with the opinions that Mr. Downie gave regarding the operations of the machine illustrated in the patent and the defendants' machines, and what they will accomplish?

Mr. Corbett: Your Honor, as I said, he has not seen the Osgood machine in operation. How can he say whether he agrees with Mr. Downie or not? This is just wasting the time of the court, Your Honor.

Mr. Richey: Well, it goes to the weight of his testimony; it doesn't make it incompetent.

The Court: Well, it goes so far to the weight that there is nothing left.

Mr. Richey: Well, I am glad to have you take that view, but my own view is that an engineer can study a drawing and testify how he thinks it will operate without actually seeing it operate.

The Court: He can testify as to how he thinks it will operate, but it won't always bring out the actual practice. I know enough about that.

Mr. Richey: Well, I yield to Your Honor's views.

The Court: A great many of these paper patents don't work; I guess you know more about that than I do.

Mr. Richey: A great many of them, yes, sir. Well, as I say, my purpose here is to shorten the matter.

The Court: I know; I agree with your laudable purpose, I wish you could shorten this up, but I don't believe you can do it if they object.

Mr. Corbett: We certainly object.

Mr. Richey: All right; then we will have to go through with it.

Q. Mr. Sessions, will you look at the drawings and descriptive part of the specification of the Clutter patent 1,317,431, and explain its operations, and what it will do. You may use the big drawing, and also the model, Exhibit P-15, if you wish. A. Referring to this enlarged drawing of Fig. 1 of the Clutter patent, this shows a machine of the inward arc type, that is, a machine of the type with a mechanical hoe in which the scoop is mounted—the scoop, which is part 3, is mounted on the stick 1; the stick is pivoted to the outer end of the boom 15, and the control of this machine is accomplished entirely through the use of two power controlled lines; the one line 23 is the hauling line, which moves the scoop toward the boom with the power control; the line 18 is called

the hoisting line. It is connected through a linkage to the stick member and boom in such a manner as to cause the combined forces to act to raise the boom and extend the stick beyond its normal vertical hanging position.

The machine is capable of swinging the scoop through a radius of approximately 180 degrees, and the scoop is power-controlled throughout that entire range. It is a machine embodying a single scoop; this scoop is mounted on a stick in such a manner that it bears a fixed relation to the stick at all times during the cutting or digging operation, whatever that may be. The specification of the patent describes the functioning and operation of the parts; I don't think it is necessary to read the particular parts of the specification, where they are brought out. The machine is adapted to cutting a trench equal to the width of the scoop, which is an important feature. Another feature of this machine is that in discharging the material from the scoop it is possible to raise the scoop to the position of discharge and then swing it back and forth until it reaches the exact point at which it is desired to discharge the material. The discharge is accomplished in one of two ways; either by tripping the latch 12 which allows the scoop to swing out and discharge the material, or the discharge may be accomplished by swinging the scoop outwardly and merely allowing the material to fall out of the open front end of the scoop.

It is possible with this machine to close the scoop or to fix the scoop rigidly with respect to the boom when the scoop is in the air; that is, it is not necessary to put the scoop down onto the ground to force the latch member to engage with the pin 5 which holds the scoop in its fixed position. It is possible to close the scoop in either manner.

Of course, the boom is mounted to swing about in a horizontal plane, to bring the material up to the side of the machine or away from the point in which the digging is going on, and to discharge the material in a different position. I think that describes it.

Q. Now, will you take up each of the other patents in suit and describe the constructions and the mode of operations and results, and as you go from patent to patent, will you preface your remarks with the number of the patent? You can use the model, the drawings and the exhibits here, the catalogues and so on, if you wish.

A. The machine of the first Downie patent, which is Patent 1,511,114, is a machine of the type of mechanical hoe or mattock, or the inward arc scoop, similar to the Clutter machine. It has certain features differing from the Clutter machine. The machine in general embodies all of the features of the machine of the Clutter patent; that is, in its functioning and mode of operation and results accomplished.

The machine embodies the stick 11, boom 2, the linkage 15 connected to the hoisting line 18; the hauling line 43 is connected to the scoop through a bail 40. The stick member of this Downie Patent 1,511,114 is constructed of two channel irons. This appears best in Figs. 3 and 4 of the patent, and is not shown clearly in Fig. 1, and these are two channel irons which have their flanges facing inwardly towards each other, and as shown in this model which is Exhibit P-17; two channel construction of the stick makes a very strong and rigid construction. The channel irons are spaced from each other and held in that spaced relation by spacing members. This construction provides a much longer and more secure bearing between the stick and the boom at the bearing, which is marked 6 in Fig. 1 of the patent. The scoop itself is provided with a drop bottom as it is called; that is a bottom which is pivoted near the lower front or open end of the scoop, pivoted to swing freely through 180 degrees or more; a latch member at the rear of the scoop engages the bottom and holds it in position.

This construction makes possible a very desirable feature of momentum closing, which has been demonstrated by Mr. Downie, and demonstrated in the demonstration of the machine which the court saw yesterday; the bucket may swing closed in mid-air; the bottom of the bucket may swing closed in mid-air, and at the same time this opening of the bucket in this manner provides a considerable improvement in the manner of discharging over that of the machine of the Clutter patent.

The scoop may be spotted accurately over a load, and in tripping the bottom of the scoop the material falls vertically downward directly under the position of the scoop, whereas in the machine of the Clutter patent the operation was such that in dropping the bottom the scoop swung downwardly and the material flowed out of the scoop in a slightly forward direction, or direction toward the machine, so that the material did not fall exactly

under the scoop, and the operator was not able to determine as accurately where his material is going to fall in loading it into a wagon or truck.

The drop bottom principle on the scoop of a machine of this type further provides the ability to discharge sticky material more readily, because in discharging, the material in the scoop first tends to free itself from the sides and end walls of the scoop as it is carried downward by the entire weight of the material plus the weight of the bottom which is swinging. Then as the material is started to free itself from the sides and end wall with the entire weight of the material and the bottom available to cause that freeing, it is able to exert the force of the weight of the material entirely upon freeing itself from the bottom.

The Court: You mean centrifugal force?

Witness: No, merely the weight—the force of gravity acting on the materials; just the weight of the material acting downwardly is first used in freeing itself from the side walls, and later from the bottom of the scoop.

This machine is capable of performing the function of undercutting which was explained very thoroughly, and was demonstrated in the exhibition of an actual machine yesterday. This undercutting requires the rigidly constructed stick in this first Downie patent, No. 1,511,114, and a rigid or a strong but yet comparatively flexible boom, a boom that is capable of being twisted as we apply our side thrusts, and at the same time the scoop must be held rigidly and very securely to a rigid stick, so that the scoop does not itself tend to twist out of the line of pull. The teeth of the scoop must be presented in the direction of the line of pull or the line in which the trench is to be cut, and it must be off to one side. This requires the features as shown in the first Downie patent, and as were embodied in the machine of the Keystone Driller Company. The scoop in this first Downie patent has what are called side rake teeth. These are shown as part 27 of the patent drawing. The side rake teeth are rigidly secured to the sides of the bucket, and not to the bottom; the teeth must protect and cut a clearance sufficient to prevent destroying of the pivot bolts for the bottom. These pivot bolts must remain in a condition whereby the bottom may swing freely at all times in order to accomplish this momentum closing, and the forces acting against the bolts are severe, particularly in striking

a gravity blow and in cutting through hard materials. The pivot bolts would soon be destroyed by rubbing against the side of the trench unless they were otherwise protected, and it is important that these side rake teeth serve to protect those pivot bolts and cut a sufficient clearance for the rest of the scoop body so that it may be withdrawn backwards through the trench that has been cut in the course of operation, because it is frequently important that the operator be able to paw, as was demonstrated yesterday, in the trench and the scoop must come back freely and go forward freely. The digging operation is not merely a fixed swinging upward in the same direction and out of the trench; it is frequently and commonly a pawing and back and forth movement, so that the trench must be cut wide enough to clear all the members of the scoop other than the tooth blades themselves, or the side rake tooth blades themselves. I think that covers the first Downie patent, No. 1,511,114.

Now, referring to the second Downie patent, No. 1,543,250, this is a patent which relates to the so-called stop or heel or abutment. The purpose of this patent and invention was to avoid the so-called blind spot which has been talked about and described. These stop parts are indicated in the patent as 23 and 24, shown in Fig. 3 on the page nearest the specification; that best shows that actual detail of the stop mechanism. The functioning of the parts is merely such that when—I will demonstrate this by the use of the model of the Keystone machine, which is Plaintiff's Exhibit P-17—when the stick approaches a certain angular relationship to the connecting links or bridle members, which are parts 15 of the patent, there is provided a means whereby the link or bridle members 15 are caused to move upwardly, out of the line of tension or line of pull, out of alignment with that line, which extends from the line of the hauling line 22 out to the point at which that hauling force is being applied, which is the pivot 14 of the patent drawing, and thereby maintains a definite mechanical advantage or lever arm whereby the scoop may be moved in and out through a considerably longer range than is possible if the means—the abutment means or stop means, are not provided. This is very important in discharging—spotting, as it is called—material over a truck. A truck may stand out here opposite the machine, and if the bucket will only stand in one position, or can be extended over a comparatively small range, if is

often difficult to get directly over the truck, and this merely increases the spotting range, and in increasing this range avoids the so-called range which cannot be reached without these stops, or the so-called blind spots, which is not available, and in which the scoop may not be used, if such mechanism is not employed. And I might say further in connection with this patent, before I go on, that this action takes place and occurs at numerous elevations of the boom; that is, with the boom down low, the action is necessary and occurs in those positions, and the parts contact and the angular approach of the stick to the connecting link or bridle is limited, but at the same time, while this angular approach of the stick to the connecting link or bridle is limited, at the same time the scoop may move freely inward toward the boom. You will note that the angle is definitely limited between the stick and the bridle, and that limitation of that angle, angular approach of those parts, causes the linkage to be thrown upward, the linkage or bridle, which is part 15 of the patent, and out of the direct line of tension, but the scoop may at the same time be continued in its motion in and out from the boom. With these parts of the stick and the connecting link in fixed relationship, and at various heights of the boom, that same action occurs. In fact, through a complete range of elevations of the boom that action may occur.

Referring to the third Downie patent, No. 1,709,466, this patent relates to the means for connecting the scoop proper to the stick. It provides a means which is readily interchangeable; different widths and sizes of scoops may be taken on and off of the machine and the stick with great facility, and this interchangeable feature at the same time provides and retains the very desirable feature of preventing, or of not using any bolts which are in shear; that is, there is no shearing action of the bolts which are used in changing the scoops. This means that these bolts are only in tension, and no serious wear occurs in the holes through which the bolts pass. Your Honor understands that if bolts are in shear, there is a side thrust employed on the bolts, or rather, assuming my pencil here to be a bolt, the bolt is forced sidewise back and forth, and this action wears the bolt and gradually enlarges and wears out the hole through which the bolt passes, at the same time making it very difficult to maintain a scoop rigidly mounted upon a stick, because as soon as wear occurs, or as soon as the bolts shear,

there would be a tendency to affect that rigidity which we have here; whereas the bolts are always under tension under the pulling force, and they have no tendency to destroy themselves and destroy the hole through which they pass, and they maintain themselves much longer, and the bucket may be maintained tight and rigid on the scoop free from vibration with much less difficulty. The bolts which accomplish this are shown on the patent drawings as 28, which is the bolt which attaches the foot of the stick to the cross member over the top of the bucket, part 24, the bail.

The Court: Well, there are two bolts?

Witness: There are four bolts shown on this; these four bolts act to attach the foot of the stick through a definite foot member on the end of the stick. The bolts 33 pass through the flanged plates or angle plates 25 in such a manner as to hold these plates in against the foot of the stick and prevent the stick from twisting, or the bucket from twisting on the stick, and prevents rubbing and wear at that point, and prevents the bolts 28 from being subjected to shear. The bolts 32 are also provided and necessary to be taken out to make the change in scoops. These bolts are located at the rear of the scoop, connecting bracing members 29 to the rear of the scoop in such a manner that those bolts 32 also are subjected to tension forces and not to shearing forces.

This patent also contains a stick made of two channel members, and it is a rigid structural stick, which employs a drop bottom; as shown in the patent, it uses a drop bottom scoop, which is part 18 in the patent drawing. In general, this machine functions and employs the same features as the machine of the first and second Downie patents, the particular feature involved in this patent being the method and manner of attaching the scoop to the stick.

The fourth Downie patent, No. 1,716,432, is the patent which relates to the side rake teeth. These teeth are securely fastened to the side walls of the scoop; they must be such as to stand severe blows, and must be narrow and not to excessively widen the wall portion of the scoop to which they are attached. The teeth shown are provided with an aperture through which the pivot bolt passes; the aperture is 23 in the patent drawings, and the pivot bolt is 14 of the patent drawings. This pivot bolt is the pivot about which the drop bottom or

momentum closing bottom swings freely in order to accomplish the discharge of the material at the subsequent momentum closing of the bottom. The teeth are provided with a material penetrating point 19, which engages the material in a horizontal plane; then a cutting surface or shearing surface 21 is provided, which shears the material in a vertical plane. Surfaces are provided which tend to turn the material inwardly into the scoop body, and in this manner the action of the side rake teeth is effectively accomplished; their functions are accomplished in a very successful way, and makes possible in an entirely satisfactory manner the single width cutting, and divides the forces acting on the teeth, first to cut and cleave in the horizontal plane, and then to cut and cleave in the vertical plane, to cut the necessary clearance for the scoop when it is used in cutting trenches which are of the width of the scoop. I think that covers it.

Q. Now, you said you were at the tests yesterday, attended by counsel and experts for both sides, and the court. Will you state just what was done at those tests. A. At those tests a Keystone ditcher, that is, a machine embodying the features of the patents here in suit, was used; it is the particular Keystone machine which is known as Model 17. It was used to perform and demonstrate the various functions involved in trench and ditch work, and the operations which are necessary in that type of work, and the machine employed a two-member control, and was operated by the two hands of the operator throughout all the digging operations. The machine was used to strike gravity blows, to show the great force which may be developed in a machine of this type, and causing the teeth to penetrate hard material and sticky material. The scoop was used in the pawing action, which is very necessary in certain parts of the operation. The scoop was dumped by employing both the simple gravity discharge, at which the scoop is extended outwardly and the material is allowed to fall out of the mouth of the scoop, and it was dumped by using the drop bottom, and causing the material to fall accurately below the point at which the scoop is positioned at the time the dumping occurs. The bottom was closed by momentum.

The Court: Well, it performed all of the functions that he testified to?

Mr. Richey: That is right.

Witness: The machine was used for rooting, to demonstrate that feature of undercutting, and all other features that I have described.

Mr. Richey: Now, can I take this witness off and put on a fact witness?

The Court: I don't see why you can't. You are pretty near through with him, aren't you?

Mr. Richey: Yes, sir, with the exception of the question of infringement.

Thereupon the witness EDWARD M. MORRISON, being recalled for further examination by the plaintiff, testified as follows:

DIRECT EXAMINATION by Mr. Richey.

I have seen machines of the General Excavator Company, one of the defendants in this case, as illustrated in the cuts and photographs, Exhibits 25, 26, 27 and 28, and particularly the view on page 9 of Exhibit 25, and have seen them operated. I have seen this machine in Cleveland, seen them in Akron, and worked right along side one in Akron, which was on a sewer job —Louis Crano owned the machine—for a period of two months, I think. This machine was doing ditch work; sewer work. As to operation and compared with the machine of the Keystone Driller Company, the bucket action of it is practically the same. As to the action of other parts, the drum action and stuff like that is a different action in the machine, that is, in the power plant. As far as the ditching attachments were concerned, it is practically the same hook-up. It does the same thing the Keystone machine does. Referring to the machine of the Osgood Company, as illustrated in P-29, shown particularly on page 20—well, on all pages in this, I have seen machines like that in operation. I have seen them in Cuyahoga Falls; that is a suburb of Akron, in which the machine belonged to the Frank George Construction Company, and in fact—see, I can tell you close to the date; well, it worked on this one job there, well, I will say May until the latter part of June, up maybe to the 1st of July. It was doing ditch work; trench work.

Q. Well, limiting my question to the attachment features, that is, the boom and stick and scoop and that

part of the combination, how did the operation of this Osgood machine compare with that of the Keystone machine you have testified to this morning? A. Practically the same. The same as the National, too.

Q. The General, you mean? A. Yes, the General. It is all on the same principle.

Mr. Richey: That is all.

Cross Examination by Mr. Corbett.

Q. What type of General excavator, or what type of Keystone Driller machines are you familiar with? Are you familiar with the type wherein the link goes away from the boom and is not connected to the boom? A. I am.

Q. Is that the one you are familiar with? A. I have been familiar with all of them, and worked all types of them.

Q. You are also familiar with that one over there that has the upstanding support? A. Yes, sir.

Mr. Richey: That is the Clutter machine.

Witness: Yes, sir, the Clutter type over there.

Q. Now, in the Osgood machine, did you see any—in this photograph, for instance, did you see any support such as this, mounted on the sheave, for supporting the sheave from the boom? Just compare that photograph and see if you can find any such feature.

Mr. Richey: Better show him that. Do you understand what he means?

Witness: Yes, I understand your support. No, you don't have that raise on top there.

Q. Now, you spoke this morning when you were on the stand about undercutting; you gave an example in which you would cut around a tree. Now, it seems to me that there was something, in thinking that over, that was not quite clear to me, and probably to the court. Will you tell once again just what you did in this cutting around the tree? A. Well, undercutting is practically—it is a place where you usually have to get your machine off the line, or say that you have a sewer or a line of that type, if you want to reach under a tree and not remove the tree, or anything. So as you come to this—

Q. Now, I believe it would be better, Mr. Morrison, if you would, instead of explaining the general operation of undercutting, if you would just explain what you

did in that particular case that you spoke of. You told, I think, or said that you undercut a tree; is that right? A. That is, cutting around trees or poles or where you couldn't set your machine in line.

Q. I am talking about the particular instances; I want you to tell the court about that.

The Court: Some particular instance.

Q. You said there was some particular case where you had done that, didn't you? A. No, I said not any particular case, but I said only in cutting around trees or poles, or where you have a stone in the ditch.

Q. Well, you have done that? A. I have done that a number of times.

Q. That is what I want you to explain. A. Well, as you start to run your machine off the line, which you have to do—

Q. You are speaking about the whole machine now? A. The whole machine; there is times when you are sitting at least three feet off the line.

Q. In other words, the trench would be right in the center of the front of the machine? A. Sure.

Q. But in your operation of undercutting, where it becomes necessary to do that, you move your machine over so that the trench is not— A. In the center.

Q. —in the center of the machine; is that right? A. That is right. You start your undercutting, and you throw your bucket according to what you figure you are off the line to make your undercutting and still be on the line of the ditch.

The Court: In other words, the trench keeps in line while the machine is off the line?

Witness: That is it.

Mr. Richey: The bottom of it is on the line, but the top curves around the pole.

Witness: That is right.

Q. And when you finish your trench you have a crooked line of the trench, your trench is not a straight line all the way through; is that right? A. Not at the top.

Mr. Corbett: That is all.

By Mr. Reed:

Q. Mr. Morrison, with reference to the General machine, you say you worked with that in Cleveland, or in that territory? A. In Akron, I have seen them work in Cleveland.

Q. What was the date of that approximately? A. Well, let's see—it was around '29; I think we started on the job the middle of May, around there.

Q. And the General was on the job then? A. The General was put on the job shortly after we started.

Q. And was the General a full revolving shovel? A. It was.

Q. And the Keystone that you were operating was a Model 4? A. A Model 4.

Q. And that is not full at all? A. Not full at all.

Q. As far as you know the Keystone manufactured a full revolving shovel at that time? A. No, they were talking of it, or getting the plans.

Q. And did this General machine have the upstanding links on the boom? A. Just what do you mean?

Q. The upstanding—this characteristic of the Clutter machine connecting the horizontal links with the boom? A. I don't believe they did.

Q. You understand what I mean, do you, now? A. Yes.

Q. And what was your answer? A. I don't think they did. I couldn't say for sure, for I didn't notice it at the time that close.

Mr. Reed: That is all.

Thereupon the plaintiff further to maintain the issues upon its part, called as a witness in its behalf HOWARD H. ELMIRE, who, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Edgerton.

My name is Howard H. Elmire. I live at Arlington, New Jersey. I am 43 years of age. I am manager of the Eastern Sales Branch of the Keystone Driller Company, Arlington, New Jersey. As manager of the Eastern District for the Keystone Driller Company I have occasion to cover the territory and become familiar with the movement of competitors' excavating machines. I have seen a General excavating machine in operation and also an Osgood machine. I have operated these machines. The General and Osgood machines of the instroke ditcher type are capable of the same function and mode of operation as the Keystone Driller machine. I couldn't say to what extent I saw the General back hoe machine operated, but I have seen quite a few of them.

I would say I saw these machines operated in the period of the last four or five years. I saw them digging ditch with the pull scoop on, that is, oh, practically the same, practically the same operation with the Keystone of digging the ditch. I have seen them working in shale and that character of soil. As to operating a General machine myself, I have had a hold of them and run it some. I have never run one for a contractor, but I have handled the control.

As to the Osgood machine, I have seen it operated about the same length of time, four or five years, as near as I can recall; it may have been a little longer. I saw this Osgood machine operating around New York City. The soil I saw them working in was loam, sand, shale, rock—all kinds of formation. As to operating this machine, I have had a hold of it and run it at the controls. The machine shown in Plaintiff's Exhibit 25, the General catalogue, page 9, is practically the same machine as I saw them working around there.

The machine shown in Plaintiff's Exhibit 29, a catalogue of the Osgood Company, on page 20, I would say is practically the same machine that I saw. The machines I have seen I know that the attachments bore the same identification as indicated on Osgood Exhibit 29.

Referring to the General machine, the only operation or operating that I have done at all with the General would be if I would go around to the machine where the operator that was running the machine knew me, and he would say to me, "Well, here, try it." And I would go up and take a hold of the levers, and maybe take out three or four or a half dozen scoops full out of the ditch for him, cast it over on to the side, and then give him the machine again, and maybe I would stand there aside of him while he was operating for say half an hour or so, talking with him while he was digging. But I have never been hired by a contractor to operate either a General or the Osgood with the ditcher scoop.

Q. And would the same apply to the Osgood machine? A. Yes.

Q. You have operated that under the same circumstances? A. Yes, sir.

Q. Now, you are the gentleman that operated the machine yesterday? A. Yes, sir.

Q. At the demonstration? A. Yes.

Q. Will you compare in your own words the operation of this Keystone that you demonstrated yesterday, or one of the Keystone of the back hoe type, with that of the General and the Osgood?

Mr. Corbett: Your Honor, we object to that. We see no bearing in that, that it has in this case. It has no bearing in this case. It is a question of comparison, and if at all, it is a question of comparison of the machine of the patent with the machine of the Osgood Company.

The Court: You claim that this machine that was operated yesterday is not a machine that corresponds with these patents?

Mr. Corbett: Absolutely; entirely different from the patents, in a number of respects. We have shown some, and we will show more.

Mr. Edgerton: In those respects, Your Honor, relating to attachments and detail that haven't anything to do with the function.

The Court: Oh, I think we should take this testimony, Mr. Corbett. Of course, if you establish what you say you are going to, that just weakens his testimony, is all.

Mr. Williams: May I make an observation, Your Honor? What is the value of a comparison of those two machines? What we are charged with is infringing a patent, not copying a machine. Now, the machines may be very similar, may look identical, and yet the one will not infringe the patent covering the other.

The Court: Well, I think we will take the testimony, but, as I say, if counsel establishes that this machine is not one constructed in accordance with these patents, why that weakens his testimony to that extent, that is all.

Mr. Williams: As I see it, it is immaterial.

The Court: The machine certainly has some relation to these patents.

Mr. Corbett: It may have some relation, but the proper comparison, if at all, Your Honor, if we make that exception, is with the machine of the patent.

The Court: I will not rule it out on that ground; you can take your exception.

Mr. Corbett: Exception.

Mr. Edgerton: Do you understand the question, Mr. Elmire, or would you like to have it read?

(Question read.)

A. As to the digging, the operation of your scoop and boom is the same thing. They do the same class of

work. The machines, of course, back in your machinery part, that operates somewhat different, the machinery part, but as to the digging, your digging your material and the like, it works the same thing.

Q. Goes through the same excavating cycle? A. Yes, sir.

Q. In substantially the same manner? A. Yes, sir.

Mr. Edgerton: That is all.

Mr. Corbett: No cross examination.

(Noon Recess.)

(Afternoon session, Thursday, March 5, 1931.)

Mr. Richey: Do you want to ask Mr. Elmire or Mr. Morrison any more questions?

Mr. Corbett: No.

Mr. Richey: All right. We will proceed with Mr. Sessions then.

ROBERT C. SESSIONS, a witness for the plaintiff, was recalled to the stand, and testified as follows:

DIRECT EXAMINATION by Mr. Richey.

Q. Mr. Sessions, will you compare the machine you saw yesterday at the test at the coal yard in operation and achievements with the machines in the various patents in suit you have discussed?

Mr. Corbett: We want to make the same objection, on the ground that the machine demonstrated yesterday is not the machine of the patents in suit; therefore any testimony regarding those comparative machines is irrelevant and immaterial.

The Court: The objection will be overruled.

Mr. Corbett: Note an exception.

The Court: If you wish you may make a motion to strike the testimony after your testimony is in.

Witness: May I have the exhibits which show the photographs of those machines, and the catalogue of the photographs, both?

Mr. Richey: You had Exhibit 24, I think—is it not?

Witness: The Keystone pamphlet which is Exhibit 24, and the photographs, Exhibit P-39. The machine shown in the Keystone Company pamphlet, Exhibit P-24, that is the pull scoop or ditcher machine shown, is like the machine—of the machine shown at the demonstration yesterday, with the exception that the machine demon-

strated yesterday had an abutment piece or stop mounted on the stick on the inward face of the stick considerably below the pivot point between the stick and the boom. This abutment is mounted something like the sketch I am marking here. This stop which I am speaking about appears on the photographs of the model 17 machine, which is also the same type of machine, the same model as that demonstrated yesterday. The photographs are Exhibit P-39, and these stops are structural steel abutments fastened to the stick; and there was also on the machine demonstrated a wooden block attached to the stick immediately above the bail which connects the stick to the scoop. This wooden block serves to prevent the hauling bail to which the hauling cable is attached from damaging the stick proper when it swings up against there. These other stops on the stick which are the steel members merely prevent the stick approaching closer to the boom than a certain definite position. That furnishes a definite stop of the stick to the boom and prevents the connection between the hauling line and the bail attached to the front end of the scoop from riding into the sheave members and destroying the sheave and damaging the boom itself by this contact. Other than that the machine demonstrated, as I understand it, is like the machines shown in these photographs, Exhibit P-39, and the pamphlet, Exhibit P-24, in all particulars, as the machine consists of a boom mounted for vertical movement up and down; a stick pivotally connected to the end of the boom, the connection to the stick being on the inner side of the stick, the side of the stick toward the machine; the machine is of the type of the Clutter and Downie patents here in suit, in that it has a mechanical hoe or hole scoop, as it is called in this pamphlet. It has the bucket or scoop rigidly connected to the end of the stick.

The Court: As in this exhibit; that is what you want to say?

Witness: Both the machine of the pamphlet and the machine which was demonstrated have the same construction, and the machine shown in these photographs, in all of these particulars. I am now naming the points wherein the machines demonstrated—

Q. In general it operates the same and performs the same function of the machines in the patents in suit you have described? A. Yes, sir.

Mr. Corbett: Objection to that. In connection with this machine out there, we would like to have a couple of

our men see that machine and have certain parts of it taken apart. For instance, we would like to have the scoop removed. I do not know that Your Honor would be interested in going out there, but I am wondering if we can make some arrangements with the plaintiff to have someone go out there with them this afternoon and do that.

The Court: Suppose you talk to Mr. Richey about that.

Mr. Corbett: I am just speaking at this time—I did not know whether the court would care to go there. I doubt the necessity of it at this time.

The Court: You mean just to see it taken off?

Mr. Corbett: Yes, Your Honor. There are several features our men want to see which I do not believe you would be interested in at this time.

Mr. Richey: We will be very glad to do that when we can get our people away from the trial.

Mr. Corbett: I mean after the session is over today.

Mr. Richey: As far as I am concerned, it is all right, unless there are some practical difficulties. I will talk with Mr. Downie about it. I will be very glad to have you look at it and very glad to have the court go along, if you care to.

The Court: You are just going to take off the scoop?

Mr. Corbett: You may want to see it later. I don't believe it is necessary now. We want to have a more complete examination. The question of assembly enters into this thing. We would like to have a little better view of it than we had.

Q. Mr. Sessions, I now call your attention to catalogue and photographs of the General machine, Exhibits P-25, 26, 27, 28, 36 and 37. Basing your answer upon what you have seen of the machine of the General Company, and what you have heard of its method of operation and advantages and results of its operations from the witnesses Elmire and Morrison, will you compare the machine of the General Company as illustrated in those exhibits, in mode of operation and results, with the machines of each of the patents in suit which you have discussed?

Witness: The machine shown in these exhibits to which you have referred, and as I understand its operation from my observation and from the description of its operation, functions in the same manner as the machines of the patents in suit.

Mr. Richey: Pardon me, I want to add to that question, a comparison of structure as well as mode of operation and results.

Witness: And this machine accomplishes the same results. In structure the machine has the general characteristics of the Clutter patent, in that it has a boom mounted for vertical up and down movement, and which can also be swung in horizontal direction; it has a stick attached to the end of the boom pivotally connected to the end of the boom; and it has a scoop at the lower end of the stick; the mouth of the scoop and the teeth are pointed inwardly toward the machine; it has a straight bridle or link member, pivoted to the upper arm of the stick, and this upper arm is a short arm compared to the lower arm of the stick; this link connection or bridle of the General machine—the General machine has also the two power control lines of the machine of the Clutter patent. As far as the first Downie patent is concerned, the machine has the scoop rigidly secured to the end of the stick, and rigid in the sense it is required to accomplish the results obtained with these machines. It has its stick member made of two channel beams with their flanges facing each other; these channels are spaced apart; it has as a result of the construction a suitably long bearing between the stick and the boom; it has the drop bottom of the first Downie patent with the side rake teeth; the bottom is pivoted at the lower end of the lower front corner of the scoop; the bottom is latched at the rear and is capable of momentum closing; the side rake teeth cut sufficient clearance to clear the sides of the scoop and the machine is capable of single width cutting; capable of undercutting, and rooting in the various functions which have been described in connection with the first Downie patent. In connection with the second Downie patent, No. 1,543,250, the General Company's machine is shown in these various exhibits which have been referred to and as shown particularly in Exhibits P-36 and P-37, which are photographs of the General machine taken by me at Summerville, New Jersey. (Shown to the court.) The parts of this machine which serve as the abutments and function in the nature of the abutments of the second Downie patent are clearly shown. These photographs were not entirely clear and I have drawn over them with ink the outline of the parts as appeared on the photograph but which were difficult to see except on close examination. Exhibit P-36 shows

the connecting link or bridle in an upward position, with the stick slightly extended outwardly from the vertical. This shows clearly the slot or parts which have been cut away of the flanges of the channels which make up the stick. The termination of this cut-away slot is marked with the letter "B".

The Court: What do you mean, follows that cut-away?

Witness: Merely by a machine or tool which cuts it down in manufacture, in construction.

The Court: Yes.

Witness: This furnishes a shoulder against which the connecting links can contact. The contact of the connecting links on this shoulder is indicated by the letter "A", and indicates that a niche had been formed in the connecting links, which was very apparent on the machine, and is apparent in the photograph.

The Court: You mean that is caused by contact?

Witness: That is caused by repeated contacts of those parts. It is wearing there.

Exhibit No. P-37 shows the same machine with the connecting link or bridle in such a position when the stick is swung inwardly; this stick has now been swung inwardly toward the machine so that the connecting link has come in contact, and these abutting parts are now in contact and will function as described in the second Downie patent, to throw the line of tension or line of pull of these sheaves out of its normal position upwardly and in that manner keep the links from coming on dead center position and prevent the development of the blind spot. The links themselves are in every sense the full equivalent of the links shown in the Downie patent, and, functionally they are equivalent to the linkage of the Clutter patent. The abutments—

Mr. Reed: Pardon me. The question of equivalency is a question for the court. You may make a comparison as to structure.

The Court: The court will so regard it.

Witness: The abutments function in the same manner and accomplish the same result as the abutments of the second Downie patent, and as shown on the model, Plaintiff's Exhibit P-17, they function to limit the angular approach of the stick to the connecting arm or link or bridle and prevent the blind spot as it has been called.

As far as the third Downie patent is concerned, the General machine is almost an exact copy of the structure shown in this patent, that is, the connection between the stick and the scoop. The machine employs a channel or flanged piece which comes up against each side of the bottom end of this stick, which corresponds to parts 25 of Downie patent 1,709,466; the end of the stick has a footing attached to it which serves as a solid footing 27 of the third Downie patent; bolts, as shown very indistinctly in this drawing, this photograph, but which can be seen, are used to attach the scoop to the stick, these bolts correspond to bolts 28 of the third Downie patent; the structure employs the rear bracing members which are connected to an angle-shaped piece at the back of the scoop by bolts, which correspond to the bolts 32 of the third Downie patent; the structure is such that the bolts are subjected to tension and not to shear in the same manner as the bolts of the third Downie patent; and the structure is adaptable to accomplish the same results of the third Downie patent in making readily interchangeable scoops for the stick.

The fourth Downie patent, 1,716,432, is used and shown most clearly in photograph of Exhibit P-27. This shows on photographs F and G, and these side rake teeth on this General machine have a material penetrating point which corresponds to the point 19 of the patents. They have a shearing face or edge which slants at approximately 40 degrees to the horizontal, corresponding to the shearing edge 21 of the fourth Downie patent; they have surfaces which tend to cause the material to be forced inwardly into the scoop, corresponding to the surfaces 22 and 24 of the fourth Downie patent; these teeth are bolted.

The Court: When was this photograph taken? You took that?

Witness: I took this one.

The Court: Do you know when it was taken?

Witness: Yes, sir, I can tell you. (Witness refers to document.) These photographs of this General machine were taken by me January 21, 1931. The teeth are fastened to the sides of the scoop and not to the drop bottom; the pivot bolts pass through the center in the widest part of the teeth as shown in the Downie patent as bolts 14 which pass through the holes in the teeth of the fourth Downie patent which are marked 23. These same teeth are shown in Plaintiff's Exhibit P-28, particularly on

sheets marked 10 and 13. The general features of these patents in suit, they exist in the General Excavator Company machines as shown in these catalogues and photographs.

Q. I now call your attention to photographs and catalogue of the Osgood machine, Exhibits Nos. 29, 30, 31 and 32. Based upon your observation of this machine, and what you have heard about the operations as testified to by Mr. Elmire and Mr. Morrison, will you compare the Osgood machine shown in these exhibits, in structure, mode of operation and results with the machines of each of the first four patents in suit?

Mr. Corbett: Your Honor, we object to that. He is asking this witness to compare the Osgood machine as to structure, results and mode of operation, when the witness has admitted he has never seen the machine in operation, and is attempting to base that on hearsay evidence produced by the witnesses Morrison and Elmire. They practically said nothing about the operation of the machine except that they operated the same. This witness has never seen this machine operate and he is not qualified to state what the functions of that machine are. Merely a general statement by these previous witnesses that it operates in the same way does not give him a basis to answer that question.

The Court: What do you say to that, Mr. Richey?

Mr. Richey: They said that the Osgood machine operated the same and performed the same functions as the machine we all saw operate yesterday including this witness. There is a description of the operation and functions of the Osgood machine. Now, based on that, I contend I can ask this witness, as an expert, a hypothetical question, asking him to assume that the machines shown in these exhibits are operated as those the witnesses said, to compare that with the operations of the machines of the patent.

Mr. Corbett: Your Honor, the witnesses merely said that the machines operated the same. That does not even give this witness any information. If he is going to testify about the functions and manner of operation of these machines, he has got to see how these machines do it. He cannot do it intelligently otherwise; and we object to it.

The Court: Well, I think he can testify hypothetically. Suppose all your machines were destroyed.

Mr. Corbett: That might be a different matter. That might be the best evidence. In this case all the machines are not destroyed. If he is going to testify about this, we submit he should have seen the machine in operation.

The Court: I think, being an expert, he can testify hypothetically.

Mr. Corbett: If he is going to testify about the operation of this blind spot, and these various other features, he does not know what actually occurs. The witnesses said nothing about that, Your Honor.

The Court: No question has been asked about that yet either.

Mr. Corbett: He asked him to compare the function and operation.

The Court: As far as these witnesses have testified, I think this witness may take that and answer the hypothetical question. Object to the different questions as we go along. Go ahead, Mr. Richey.

Mr. Corbett: Note an exception.

The Court: Is there anything before the house now?

Mr. Richey: Yes, I asked him the same broad question with respect to all the patents.

The Court: I suppose your question is too broad.

Q. Suppose, Mr. Sessions, you answer the question, first, with respect to the Clutter patent?

Mr. Corbett: I don't know whether Your Honor got that question fully, did you, the previous question?

The Court: No, I have not, now.

(Question read)

The Court: What is your objection to this particular question,—too broad?

Mr. Corbett: On the ground that this witness has no knowledge of the operation or functions of the first machine when he has never seen it. Furthermore, these witnesses who testified gave no information about the operation of the machines except to say they are the same in function.

The Court: The witnesses testified the first machine operates the same as the machine seen yesterday, is that not so?

Mr. Corbett: That is a general statement as to what they did. It dug dirt. That is about all they said.

Mr. Williams: It was a very general question and a very general answer.

Mr. Richey: Well, he told what they did.

The Court: Of course this witness' testimony will not have the force of testimony of a witness who has seen the operation of the Osgood machine, and not as strong as one who operated the Osgood machine; but I do not think it is irrelevant because he has not operated the machine or seen one in operation, in view of the fact that he is an expert. He knows how these other machines operate; knows how this machine is constructed; and he is assuming that what these other witnesses said this morning is true. It seems to me his testimony is competent. Go ahead.

Mr. Corbett: Note an exception.

Q. Will you answer that question which was read to you, the first question about all the patents? A. Yes, sir. Referring to the exhibits mentioned in the question and in connection with the Clutter patent 1,317,432, I find that the Osgood machine consists of a boom mounted about a pivot at its lower end for vertical up and down movement, and adapted, because of its mounting on a rotating carriage, to be swung in a horizontal position. This boom has connected to it at a pivot point at its extreme end a stick which carries rigidly secured to its lower end a scoop which has its open end projecting inwardly towards the machine; the upper end of the stick, which is a shorter section than the lower end of the stick, and considerably shorter, has pivoted to its outer face links or a linkage which carries a sheave to which the hoisting line is attached; the hauling line is attached to a bail mounted and attached to the front open end of the scoop. The machine may be controlled in its digging operations entirely by these two lines. The scoop is capable of swinging outwardly into approximate alignment with the boom, that is,—I stated that incorrectly—the stick with the scoop at its end is capable of swinging outwardly so that the stick comes in approximate alignment with the boom; that is, the machine is capable of moving the scoop through 180 degrees, as is the case in the machine of the Clutter patent. The machine is capable of cutting a single width trench. In general, the machine has the qualities which make it capable of accomplishing the results accomplished by the machine of the Clutter patent, and operates in the same manner.

As far as the first Downie patent is concerned the machine has, as I have described, in connection with the General machine, has a bucket rigidly mounted on the

end of a stick; the stick is made up of two channel members with their flanges facing inwardly. This view "B" of Plaintiff's Exhibit 30 is looking at the uppe. end of the stick. This stick consists of two channel members with the flanges facing inwardy in the same corresponding positions of the channel members of the stick of the first Downie patent. The machine side of the stick is covered with a third channel member and a plate at its upper end, and the outside of the stick is covered with a plate which holds these channel members in spaced apart relationship. This channel and place may be seen by examining photograph "J", Plaintiff's Exhibit P-31, and the channel on the inward side here of the plate on the back is seen right along the back side; the machine has a long bearing at the point which connects the stick to the boom; it has a drop bottom, that is, the bottom may be opened and is pivoted at the front lower end of the scoop; it has a latch which is used to hold this bottom in position; the machine is capable of a momentum closing of the bottom; the machine has side rake teeth as described in the first Downie patent.

Mr. Corbett: If I may interrupt, pardon me, Mr. Sessions, we had copies of these photographs and we have not got the letters on them, and Mr. Sessions is referring to "J" and various things like that.

The Court: Take a little time and clear that up.

Witness: I think I can go on without referring to those particular photographs.

The Court: You had better wait.

Witness: All right.

(Counsel compare various photographs with witness.)

Witness: The Osgood machine has a hauling line and hoisting line and in general corresponds structurally and functionally, as I understand it, to the machine of the first Downie patent, 1,511,514.

As regards the second Downie patent, 1,543,250, the parts in this connection are rather indistinct on the photographs and catalogues, and the sketch P-38 shows more distinctly the parts which are shown not so definitely in the photographs P-30 and P-31, and the catalogue Exhibit P-29; although these marks may be made out on these photographs and catalogue exhibits.

I will refer to the sketch P-38. The stick is so marked. The channel member on the inside face of the stick has been cut away to show how it spans the two channel mem-

bers forming the stick; it extends up above the pivot below connecting the end of the boom of the stick; the links or bridles, which correspond to the linkage 15 of the second Downie patent are shown here and are marked "link"; the hoisting line is shown running over the sheave which corresponds to the sheave 18 of the second Downie patent. The parts are shown in such a position that the stick has approached in angular relationship to the connecting link or bridle, hence to such a degree that the bridle had come in contact with the upper corner of the edges of the channel member which spans the inside or machine side of the stick. This contact will serve to throw the links and sheaves up and away out of the line of tension or line of pull which is shown as a blue line on this sketch, Exhibit P-38, and in that manner functions as the stops 23 and 24 of the second Downie patent to prevent the formation of the blind spot. The catalogue Plaintiff's Exhibit P-29—in the view marked No. 3 which bears the legend "Osgood Gasoline Back Hoe Engaged in Excavating a Section of the New York Subway. Moranti and Raymond, New York City, are the owners." It may be seen that these abutments have the function they do in the second Downie patent. The line of tension between the point on the mast to which the cables are tied, and the point to which this force acts at the pivotal connection between the links and bridle and the top end of the stick is in such a position that the pivot point of the sheave, which corresponds to the point 17 of the second Downie patent, has been displaced and the point of application of force is thrown off of the dead center position, and the blind spot will in that manner be eliminated. That shows that these parts do function in the manner as explained in the second Downie patent.

In connection with the third Downie patent, No. 1,709,466, the Osgood machine employs a structure which is practically the same in all respects to the structure of the General machine and the machine of the third Downie patent. It has the flanged angle pieces corresponding to parts 25 of the patent which provides a receptacle for the lower end of the stick, and prevents the stick turning and wearing against the top face of the bail member across the top of the stick; it has footing pieces attached to the lower end of the stick connected by bolts which correspond to the bolts 28 of the third Downie patent; it has a bracing member connected from a point on the stick midway, approximately between the lower end of the

stick and the pivot point of the boom, or at least above the bottom of the stick, to form a brace, and this brace member is connected to bent angle-shaped pieces at the back, and the scoop attached by bolts corresponding to the bolts 32 of the third Downie patent. This construction is such that the scoop may be readily changed, and the change may be accomplished quickly and effectively, and the bolts will not be subjected to shearing stresses, but will be subject to tension stresses which will not cause them to wear and become loosened so readily.

Q. Which, if any, of these photographs of the Osgood machine which you have been discussing did you take yourself? A. I took the photographs which are marked Plaintiff's Exhibit 30. These photographs were taken by me at Youngstown, Ohio. They show the boom and the stick and the scoop connection to the stick; but the parts are not mounted on the machine and are lying on the ground.

Mr. Richey: That is all the direct examination.

CROSS EXAMINATION by Mr. Corbett.

I am 33 years old. I graduated from college in 1919. I worked for my father five years. I had a scholarship in Sweden for one year; and then I worked for my father from 1920 to 1925. Then I was connected with Steel & Tubes, Inc., formerly the Elyria Iron & Steel Company, Cleveland, Ohio, from 1925 to June of 1930. At that plant I was doing engineering work and patent work. I was continuously involved in their patent matters, patent litigation, patent applications, examination and study of patents of all classes, and in general engineering work in the design of machinery, equipment, in the plant, and handling materials. I was for the last year with them with the title of general engineer and in charge of the engineering and experimental division of that company. They have plants in Cleveland, Brooklyn, New York, and formerly in Toledo, and Elyria, Ohio, and in Ferndale, Michigan. They made steel tubing, hot and cold rolled strip steel, and fabricate various parts.

Q. I wish you would refer to the second Downie patent, No. 1,543,250, and read it to the court.

The Court: Which is that, the first Downie patent?

Mr. Corbett: That is the second Downie patent; and read to the court the paragraph beginning on line fifteen, on page one, of the specification of this patent.

The Court: Where is that line 15, on what page?

Mr. Corbett: Page 1. I would like to have him read it.

Witness: "The object of the present invention is to provide an improved construction, which will permit a much greater latitudd in positioning or spotting of the loaded scoop when elevated as for dumping, and to permit greater positiveness and accuracy in controlling the position of the scoop within that range than is otherwise feasible."

Q. In explaining this Osgood structure to the court you referred to picture No. 3 of Plaintiff's Exhibit 29, is that right? A. Yes, sir.

Q. Coming back to this paragraph which you have just read, I would like to call your attention to the fact that that paragraph indicates that the purpose of these stops or abutments is to permit a much greater latitude in positioning or spotting the loaded scoop when elevated as for dumping? A. Yes, sir.

Q. Would you say that the Figure 3, in which you point out a possible bend in the line, in the hoisting line, and the link represents that shovel in an elevated position for dumping? A. May I see the picture? (Shown picture.) In view of the fact that this picture was taken above its elevation looking downward, it is very difficult to say how high that scoop is above the ground right now; but this picture shows that these abutments function in the manner of the abutments of the second Downie patent, and they will then function as I understand, and am able to understand from my observation of the Keystone machines, and of these models; in fact, they show the same thing very well; these abutments will function in any position of the boom.

Q. You certainly do not contend that picture shows that boom elevated and scoop elevated for dumping, do you, in that figure, picture 3? A. It does not look as though it is elevated high enough for dumping, no. It is difficult to say because of the shortening of the distances looking downward. Picture No. 1 on the very first sheet of this exhibit shows this machine high enough for dumping, I should say, into a fairly ordinary type of truck.

Q. But you do not see any bend in that line in that picture, do you? A. In that picture the position of the stick is such that it is just starting to position toward the scoop at which these abutments start to function, and as the stick is moved further inward and the scoop is

moved further inward towards the machine the abutments will function to create the results desired and the operations explained in the second Downie patent.

Q. You realize, do you not, that that boom also elevates under those conditions? A. I do not understand your question.

Q. When you pull on the hoisting line you not only affect the stick but you affect the boom, do you not? A. I did not say anything about pulling on the hoisting line; I said if the scoop is pulled by the hauling line any further toward the boom, those conditions would result at this particular elevation of the boom.

Q. As far as that picture is concerned you will acknowledge—picture 1, Plaintiff's Exhibit 29—that that picture shows the scoop a substantial distance off the ground; and that there is no bend in the line which is made up by the hoisting line and the linkage, and the linkage carries the sheave; do you acknowledge that? A. These parts are all so nearly in alignment it is difficult to say they are out of alignment. I would say they are in approximate alignment in this picture. The scoop, however, is not.

Mr. Corbett: That is enough, Your Honor.

Witness: At its inward position.

The Court: They say you have answered the question.

Q. Mr. Sessions, just what actual experience have you had with excavating machinery? A. I have observed their operation.

Q. Have you ever operated a back hoe? A. No, sir.

Q. Have you ever operated any kind of excavator? A. No, sir.

Q. How much have you observed the operation of excavating machinery? A. I have observed them as a matter of general interest for a good many years. Just in the past three months I have been studying them very closely in connection with my preparation for this case.

Q. But up until about three months ago you had never had any occasion to study excavating machinery any more than a casual interest, is that right? A. That is true.

Q. What would you say was your study during the past three months; about how much time did you give to the actual observation of these machines working, excavating machines of the back hoe type? A. In operation I do not suppose more than one day.

The Court: That is the actual operation of what?

A. While the machines were operating, the operations of these machines I have seen them on different occasions, but altogether I imagine it has been about one day's time.

Q. Did you ever see the machine of the Clutter Patent 1,317,431, operating? A. No, sir.

Q. As far as the actual operation of that machine is concerned, you do not know from actual observation how far that ditcher stick will—how nearly that ditcher stick will approach a position of alignment with the boom in its outward throw, do you? A. Not from operation of the machines. I have constructed and observed models made exactly to the dimensions of the patent drawings and the model which is an exhibit in this case.

Mr. Richey: P-15.

Witness: Made accurately to scale.

Q. You mean you have observed models of the boom and the ditcher stick and scoop such as are shown in Plaintiff's Exhibit P-15, is that what you mean? A. Yes, sir.

Q. Do you know who made that model or who had it made? A. No, sir, it was made some time ago I understand; according to my understanding it was made under the supervision of Mr. Downie.

Q. And you did not actually lay out the dimensions for the model, did you? A. Oh, no.

Q. Have you ever seen the device of the first Downie patent, No. 1,511,114, that is, this device minus the stops or abutments in actual operation? A. No, sir.

Q. Have you ever seen it at all? A. No, sir, not a commercial machine—I assume you mean exactly in accordance with the specific details of the structure shown in this patent.

Q. Well, substantially? A. I have seen this machine of the same parts, the same parts which structurally are such that they function in the same manner in the machine which was demonstrated to the court.

Q. But that machine had the stops on it, the abutments? A. That machine had stops on it.

Q. And you will note that the first Downie Patent 1,511,114, does not have these stops upon it? A. Correct.

Q. You have never seen that type of machine either built or operated, is that correct? A. That is correct.

Q. Did you ever see the machine of the second Downie patent, 1,543,250—now I do not mean the machine shown at the demonstrating block the other day?

A. Well, I assume you mean the machine shown in one of these earlier Keystone catalogues?

Q. Yes? A. The machine before this present model machine of the Keystone Company?

Q. Yes? A. No, I have never seen one of those machines. I have seen a General Excavator machine in operation with the stick and scoop and link mechanism of the Keystone machine, of this particular Keystone mechanism.

Q. You mean you saw the Keystone attachment applied to a General Excavator machine; is that what you mean? A. Yes, sir.

Q. Did that have stops or not? A. No, sir, that particular machine I saw did not have the stops; that was minus the stops; on that construction the stops were not in use.

Q. You were at the demonstration yesterday; the soil in which that machine operated was unusually soft, is that not correct; that is, more than the average soil? A. I am not familiar enough with soils. It looked pretty hard. It was full of bricks, old iron, tin cans.

Q. It was filled in cinders, was it not? A. No, sir; it was dump when we get down far enough.

Q. It was so soft, anyway—pardon me—I did not mean to interrupt you—it was so soft in attempting this so-called undercutting, the bank caved in, is that not right? A. Yes, sir; I saw where the bank caved in after the undercutting had taken place.

Mr. Corbett: That is all, Your Honor.

Mr. Richey: Have you a harder lot you would like to have us dig in?

Mr. Corbett: I would like to have your machine in actual working condition, if the Judge will look at it.

Mr. Richey: You hire the lot.

Mr. Corbett: Not a lot.

The Court: I did not get all of that.

Mr. Richey: This talk about these abutments out here sounds like a quibble to me. He picks something which happens to be integral with this machine. Also, this lot was the only one we could get; we could not find any place around here where there are any rocks to be dug in; it seems all the soil in the neighborhood of town here is more or less soft. You have to go a good distance away to get shale. I suggested to my brother here if he had another lot with harder soil he wanted us to dig in, we would be glad to.

Mr. Corbett: First, I will not agree with Mr. Richey that this stop is a kind of quibble. I am going to show before we finish we have not any quibble. But as far as the demonstration is concerned, as I said before, we feel that you cannot actually show the working principles of a machine of this type in any fifteen minutes demonstration; particularly when you claim with great emphasis, the plaintiff has claimed with great emphasis—more emphasis I think in the Cleveland suit—that this is a rock digging machine; and then they dig in about as soft ground as you can find. I just said to Mr. Richey if he wanted to arrange a demonstration under real working conditions, where the machine could work a half a day, to see what happens, we would be glad to meet him there, if Your Honor thinks it necessary.

The Court: You gentlemen know more about this case than I do.

Mr. Corbett: When we finish we will renew our offer.

The Court: Renew your offer of what?

Mr. Corbett: To demonstrate these machines under actual working conditions for a substantial period of time.

The Court: Whenever you demonstrate them I will look at them. It is up to you men.

Cross Examination by Mr. Reed.

I took the photographs of Exhibit P-27. That is the machine I saw in actual operation at Summerville, New Jersey. It was doing commercial work in deepening a waterway. It had been in operation on that job, as I understand. When I observed it, it was merely operated to show the function and operation of the machine. It was off to one side. It was merely a demonstration for my benefit, by an operator of the owner. He said he had been operating for some two years, I believe, on that job.

Q. You pointed out some similarities between that machine and the General machine; but as to this brace connection I did not follow you clearly. How is that brace connected with the scoop? A. The brace connected to the back end of the scoop?

Q. Yes, that is what I mean? A. That brace is connected to a special casting or forging which is constructed so as to have two approximately horizontal ledges. One of these ledges is connected to an angle clip which is fastened to the back side of the scoop and

goes up to the ledge and making a rigid connection in that manner. The casting or forging itself is connected in this machine by bolts to the bases, sides, of these angle braces. The other approximately horizontal ledge of this casting rests over the rear top corner of the scoop and the bolts pass through it and through the top of the scoop to hold it in place there.

Q. You have been referring to the prints of Exhibit P-27 marked H? A. Yes, sir.

Q. Are there any tension bolts used in connection with those braces with the rear end of the scoop? A. Yes, sir.

Q. Can you point these tension bolts out on this print? A. Do you want me to mark them?

Q. Yes, I should like to have you mark them if they are there? A. The tension bolts are very difficult to see on this print. I see them and I can mark them on the print.

Q. Are you relying on recollection of those tension bolts or what is shown in the exhibit? A. I can see them indistinctly in the exhibit and I remember what they were.

Q. You are positive there are tension bolts on there? A. Yes, sir.

The Court: Here; see if you can find them with that. (Magnifying glass).

Witness: I do not think I need that (witness uses glass and refers to book).

The Court: We will take a five-minute recess.

(Recess)

Witness: Shall I continue with the answer?

Q. Continue with the answer, yes. A. I find it is very difficult to see the bolts to which Mr. Reed is referring, in the enlarged photographs which are Plaintiff's Exhibit P-27. However I have here the photographs of the negatives from which these were made, the original size.

Mr. Reed: Those are not in evidence?

Mr. Richey: No. I will put them in. Mark them Plaintiff's Exhibits P-40 and 41 and refer to those numbers.

Witness: P-40 corresponds to sheet H of Exhibit P-27. P-41 corresponds and is the same picture, except not enlarged, as sheet I of Plaintiff's Exhibit P-27. Ex-

hibit P-41 shows the bolts which Mr. Reed asked about: two bolts, which correspond to the bolts 32 of the third Downie patent.

Q. Can you mark those bolts on the exhibits so that they will be apparent? A. I will draw lines to them because if I mark over them they would no longer be apparent.

The Court: Are those the ones you refer to, those 28's there (referring to large drawing on easel)?

Witness: No, sir. The bolts 28 are bolts of primary importance in connecting the stick to the scoop. These bolts we are now referring to correspond to bolts 32, which merely connect the rear bracing member 29 to the rear of the scoop.

The Court: Were you asking about those, Mr. Reed?

Mr. Reed: Yes.

The Court: All right.

Witness: I will mark those bolts shown on Exhibit P-41 with the reference letter A. Exhibit P-40 also shows bolts, which correspond to the bolts 28, more clearly than are shown in the enlarged photograph sheet H of Plaintiff's Exhibit P-27. I believe that these same bolts are also shown in the photograph sheet M of Plaintiff's Exhibit P-28 (shown counsel). Two bolts are shown as in the other exhibit. These bolts correspond to the abutments 32 of the patent drawings of the third Downie patent.

Mr. Reed: That will be all.

Mr. Richey: I will offer those photographs in evidence as Plaintiff's Exhibits P-40 and P-41.

The Court: Very well.

Mr. Richey: And if I have neglected to formally offer in evidence any of the exhibits from P-1 to P-41, I now offer them in evidence.

The Court: As I understand, Mr. Richey, all of your exhibits are in. As to some of them counsel have reserved the right to object at some later time.

Mr. Richey: Yes.

The Court: That is the way I understand the record.

Mr. Richey: That is all, Mr. Sessions. In response to Mr. Corbett's request to go out and take our bucket

off our stick and then extend the stick out, we are agreeable to that. We will all go out there after the hearing. If the court wants to go, we will be very glad to have him go.

The Court: I do not think it will be very helpful to me to see it.

Mr. Corbett: If Your Honor is going to see it taken apart at all, it will be better to wait until after our witnesses have discussed it.

Mr. Richey: Mr. Corbett has been courteous enough to agree if we want to put any testimony in regarding that work we may do so and consider it a part of our prima facie case. Otherwise our prima facie case is closed.

The Court: Your prima facie is closed?

Mr. Richey: Yes.

DEFENDANTS' CASE.

GEORGE GREEN, a witness called by the defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Corbett.

My name is George Green. I was born in 1898. I live in New York City. I am an engineer. I have been familiar with excavating machinery from 1914 to 1931. From 1914 to 1917 I was a fireman on a shovel; from 1917 to 1931 I was an engineer and operator.

The Court: You mean an operator of a shovel?

A. Yes, sir.

(Narrative continued) In that time I have operated back scoop, back hoe, and then the straight steam shovel, clam-shell, orange peel, drag line and skimmer scoop. When I speak of operating a shovel, ordinarily I mean an outstroke shovel; that is, the legitimate shovel. When I speak of a back hoe, I mean the type where the machine digs in its movement to the machine. I have operated Keystone back hoe machines. I operated this type of machine from the latter part of 1917 or 1918 until 1926; on and off, not continuously. I have operated an Osgood back hoe for about five years. The first type of Keystone which I operated was similar to that one over there on the table.

Mr. Corbett: The witness refers to Plaintiff's Exhibit P-15.

Witness: No. 3 I believe they call it, Keystone No. 3.

The Court: That is the Clutter patent?

Mr. Corbett: Yes.

(Narrative continued.) I have operated the later model No. 4, almost similar to Plaintiff's Exhibit P-17. The difference in a general way is that it did not have those stopper blocks up there.

Mr. Corbett: The witness refers to the stop blocks or abutments on the sheave link at the top of the ditcher stick.

Q. As I understand it, you used two types of Keystone back hoe, is that right? A. No, sir; I should say three; I have had that type too.

Q. You have used a type which embodied those stops or abutments on the link at the top of the ditcher stick? A. That is right.

Q. You were in court this morning when Mr. Morrison was discussing the question of undercutting, were you not? A. Yes, sir.

Q. And I think you were here when Mr. Downie was on the stand part of the time? A. I was here. I did not hear it. I am hard of hearing.

Q. You did not hear what Mr. Downie said; but you understand in substance what Mr. Morrison said about undercutting, do you? A. Which is Mr. Morrison?

Q. He was the operator from Akron. A. He spoke but I did not hear him.

Q. I wish you would tell the court what you know about undercutting as the desirability of it or the nondesirability of it? A. Well, in the east you might say we have three types of ground: sand, hard pan and rock. You would not dare use undercutting in sand for the simple reason if you start to cut under a bank the bank will cave in, similar to what we had in the demonstration yesterday. Hard pan, unless you went down there with a laborer and cut a piece of the bank to get a hole in you could not cut it.

Q. If you go to undercut in a trench in which you were going to place a pipe, would that be desirable as you understand the situation? A. No, sir. They would stop you in New York; an inspector would not let a man go down in a trench that had been undermined underneath.

Q. Why not? A. It is dangerous cutting out at the bottom; it weakens the top.

Q. As Mr. Morrison said this morning—and I think I state it correctly—that he has performed the operation of undercutting and he described it as, first, when he was approaching a tree, setting his machine to one side and cutting around that tree. Would you call that undercutting? A. No, sir, absolutely not.

Q. Would you say that that was good practice or practice that would be acceptable in the digging of trenches? A. Undercutting?

Q. Digging in the manner described by Mr. Morrison? A. That is about the only way you could run around a tree, a telegraph pole; move the machine over to one side.

Q. You do not call that undercutting? A. No, sir.

The Court: What do you call that?

A. That is just in the regular course of the day's work. When you run into an obstruction, move the machine to one side and continue on by there. The rest of that stuff left there has to be thrown back by hand.

Q. You mean the stuff you cut out has to be thrown back by men? A. Yes, sir; wherever you have left off and started off the other side of that obstruction; if there is something in the way there, a tree, house, telegraph pole, you have to start back of that.

Q. As I understand what you say, if you came to a tree you would cut up a certain distance from that tree, stop and go around the other side of the tree and start cutting? A. Yes, sir; if the tree is right in the center of the trench or in the way of the boom. Sometimes if it is only roots in there you could go right by it.

(Narrative continued.) As to the matter of digging rock, solid rock cannot be dug with a machine; outside of a little rotten rock, one per cent of it; it might dig that. In the first place I have never seen a machine stand the abuse of digging solid rock. I have operated a Keystone machine, and have attempted to dig solid rock with it, until the contractor would fire me or tell me to stop. This was objectionable to the contractor because no machine I know of would stand the strain of digging in solid rock. It would for five or ten minutes; but it is not what you do today but what you do at the end of the month. It would break the machine. On the

Keystone machine, I will point out on the model here parts that would be likely to break. One of the weakest parts would be this pivot casting here. The size of this casting on the Keystone machine is possibly two inches in diameter. Either that, or one and three-quarter inches.

The Court: That is the pivot which attaches the boom to the stick, is that right?

Mr. Corbett: Yes. That is what he said.

(Narrative continued.) The other parts of the Keystone machine that would suffer from digging solid rock, are these plates here? I have seen them bend six inches out of line. I have done it myself.

Mr. Corbett: The witness indicates plates at the end of the boom which are connected to the ditcher stick.

(Narrative continued.) Other parts which would be likely to break on this machine would be the teeth here; the bolts would shear off first and the teeth would crack. The cost of the bolts for those teeth in the center is about one dollar apiece. There are three bolts to each tooth. Just how many teeth is according to the width of the bucket. Some have two, some five or six teeth.

Q. Have you any idea as to the relative cost of repairs on one hand if you attempt to dig solid rock with the cost of dynamiting that rock? Can you give the court any idea about that at all? A. Well, the contractors I worked for, and those I have met in my line of work, tell me that the average repair bill was——

Mr. Richey: I don't believe he ought to testify what he has been told. You do not mean to ask him that. Say what you know of your own knowledge.

Q. Do I understand you to testify that the use of this machine in digging or attempting to dig solid rock would result in the breakage of some of the bolts which connect the teeth to the scoop; is that right? A. It would cost more to repair the machine than what you would get for digging the rock; that is time lost, delays, repairs.

Q. Have you any idea about cost in breaking this rock by dynamite in comparison with the cost of those repair parts?

Mr. Richey: Should we get his idea on that? Is that not too far afield? Should he not know what he is testifying about?

Q. Only answer so far as you know about this matter. A. In regards to—

Q. As to the comparative cost of dynamiting with the cost of breaking tooth parts? A. As I understand it, it would be a whole lot cheaper to blast it than to take and try to jab it out. It would break the machine.

Q. Most of these contracts are taken on the estimate of cost and you have to keep within a certain cost? A. You bid a certain price for your work.

Q. In the case of the drop bottom bucket, how about the question of the pivots upon which the drop bottom swung; would you say they would stand up under the digging of solid rock? A. No, sir.

Q. What is the approximate size of those pins in diameter? A. I should say probably 2 inches, 1¾.

Q. You have spoken, I think, unless I am mistaken, of rotten rock, or suggested that it might dig rotten rock. Can you say about what percentage of rotten rock you would strike? A. We have encountered, in all the years I have been at it, one per cent., total amount we excavated.

Q. That is, of the rock you excavated, about one per cent. of it might be rotten rock? A. We could dig out, yes.

(Narrative continued.) The practice is when you strike solid rock, is to use a jack drill; drill holes through the rock, and then dynamite it. In New York City, the city is practically underlaid with rock. In some places it is near the top and in some places it is down quite a distance.

Q. Something was said here about the use of this Keystone device as a back filling device. What have you to say as to the custom with regard to the use of the Keystone back hoe as a back filler?—Does Your Honor understand the back filling?

The Court: Putting the ground back into the hole?

Mr. Corbett: Yes.

The Court: Yes.

Q. Go ahead. A. The back filling, we have tried it a few times with a back hoe, but we found it an advantage to take that arm bucket off and put the skimmer scoop on; stay on solid ground; push the dirt in the hole.

(Narrative continued.) When you back fill with the Keystone excavator, the machine stands on one side of

the trench and the bucket reaches out across the trench and pulls the dirt to you into the trench. The disadvantage about this practice is, if there was a deep cut, ten, fifteen or twenty feet deep, putting the weight of the machine like that on the bank, the bank is liable to cave in. There is always that possibility. It has happened a number of times. It happened with me.

Q. Mr. Downie testified here at considerable length that in digging rock, or in digging exceptionally hard material, that he performed what is known as a picking action; and he said that the custom was, in performing this picking action, with the Keystone back hoe, to elevate the scoop with the points down to a height—well—anywhere between three feet and six feet. Possibly he said more. Anyhow we will say he said four feet above the ground, and to let the scoop drop by its own weight, plus a part of the weight of the stick, without any restraint from the hoisting line. Is that in your experience the way in which these back hoes are ever operated, to your knowledge? A. Take that model there, lift that bucket five feet and drop it down without trying to hold it, with the old machine with the bow heel on top, she would have a tendency to swing one way or the other.

Q. Do you consider it important to hold a control on that line when dropping your scoop? A. Yes, sir. It had a different control than what they have on this new type.

Q. Mr. Downie also said that in effect this was a gravity blow by the Keystone excavator—he made quite a point of the matter of retracting, pulling in, the hauling line, which is this line indicated, just before the point of the scoop struck the ground. Would you say that that was an operation that is frequently used by operators? A. If a man is reckless about a machine and does not care about expense, he could do that.

Q. What happens to this Keystone excavator back hoe with regard to the pivots after you have used it for quite a while? A. Which pivots do you mean?

Q. The pivots of the drop bottom.

Mr. Richey: Had you not better limit him to his own knowledge and experience?

Mr. Corbett: I am asking him of his own knowledge and experience. You understand you only answer what you know.

Witness: That is all I am doing. It would be the same thing as dropping the bucket four or five feet. The

strain would be all here. (indicating) It would fall right in that latch.

Q. Do these pivot pins wear to any extent? A. I have seen them egg-shaped in three or four days because of the condition of the digging.

Q. When they wear how does that affect the continued operating of the back hoe, the scoop? A. We have that trouble—the door would keep open and we had to build straps here to keep the door closed.

Q. In other words, when the pivot pin wore, the latch would open when you struck the point of the teeth into the ground? A. Yes, it would drive this door back and away from the latch.

The Court: On what machine?

A. Why that was on the No 4 machine, the steam machine sold in 1923.

Q. What year? A. 1923.

Q. What company's machine? A. Keystone.

The Court: What model was it, do you know?

A. No. 4 model.

Mr. Corbett: Have you got a picture of your No. 4 model, Mr.—

Mr. Mahoney: Here is the No. 4 model; the catalogue bulletin number is on the bottom.

Q. Is that the machine you are speaking of (book shown witness)? A. No, sir. it was a later model than that.

Q. This machine you speak of you say was a steam driven machine? A. Steam driven.

Q. Did it have the stops or the links or not? A. No—you mean up here (indicating)—no, they did not have them.

Mr. Corbett: The witness points to the abutments on the sheave links at the top of the ditcher stick.

(Narrative continued.) The machine I spoke of, wherein the pivot pins wore and the latch came open, to all appearances looked similar to this, outside of putting the block of wood up here, to stop breaking the sheave.

Mr. Richey: That is P-17.

Mr. Corbett: The witness refers to P-17.

(Narrative continued.) I could not say whether the attachment came into our hands with the block of wood on the boom—whether it was there or I put it on. I re-

member putting some on. Whether there was one there when the machine came, I cannot say. It was on the machine I am speaking about in 1923 and 1924.

Mr. Corbett: Mr. Richey, I would like to have your model over here.

Mr. Richey: All right. Bring it over.

(Mr. Downie brings model over and places it on the court's desk.)

(Narrative continued.) I operated a Keystone machine such as that shown in Plaintiff's Exhibit P-15. I operated that type in 1921 and 1922. No, I was not able to dig solid rock with that machine. With this machine you could dig with reasonable success sand, and the type of gravel that we saw out there yesterday, and some sorts of hard pan with no boulders in; if it had the boulders in you could never move them with that type.

The Court: That is, with this type here?

Witness: Yes, sir, that type.

The Court: The old Clutter machine.

Q. What type of ground or soil could you dig with this type such as shown in P-17? A. The same ground; possibly a little hard pan with the stone.

Q. You mean almost the same ground as the machine P-15? A. Yes, but a little bit better.

Q. It would dig a little bit better? A. Yes, sir.

Q. First make clear just what you mean by hard pan? A. Well, it is a kind of dirt you find close to hard, solid rock, and is a very hard dirt.

Q. Is it clay or like clay? A. Well, it is as smooth as that; when you go to cut it it is much harder; and sometimes quite often in hard pan you find these little boulders that size (indicating). You cannot move them. You have to put in a stick of dynamite or cut them by hand.

Q. Is hard pan as hard as shale? A. I am not acquainted with shale.

The Court: Ask him if either one or both of these machines will excavate clay.

Q. Will either one of these machines dig clay? A. Oh, yes. Clay is soft.

(Narrative continued.) With the operation of the machine of the Keystone Driller Company, represented by Plaintiff's Exhibit P-15, we had almost the same diffi-

culty with No. 3 as we had with No. 4; outside of the door, this latch would not stay closed; we put a block of wood to hold it there; every time you hit something hard down at the bottom the door would open, when you go to dump it.

Q. And, as I understand you, you had difficulty keeping this latch closed, and you put a block underneath the latch to keep it from sliding down, is that right? A. We had the same trouble when we went to point it with the bars—these bars bend—I have sheared these off a couple of them and have seen other people do it.

Q. How about the matter of dumping this pivoted scoop of Plaintiff's Exhibit No. P-15? What was your experience in dumping? A. Well, if we had clay, the bucket would never stand out as far as this type would.

Q. You mean the dumping operation? A. Yes, sir.

Q. Speaking of dumping on a spoil pile? A. Yes, a spoil pile; that is all we ever do; very seldom in trucks.

Q. Did you ever use this machine for dumping in trucks—referring to Plaintiff's Exhibit No. P-15? A. This machine?

Q. Yes, or attachment. A. We have done it but it has not been very successful, putting it in trucks.

Q. What is the drawback about it? A. At that time we did not use the motor trucks. They were using these horse-drawn trucks. They were so much smaller.

Q. Suppose you describe fully the operation of using the device like P-15 for dumping in wagons or trucks? Just what do you do and what happens? A. You raise the boom up to a certain position. You have a man on the ground. There would not be any cable up here. And let it run out; but they never were much on running out; they much prefer to come into you than to go out.

Q. You say you have a man on the ground; you mean for pulling the latch? A. To dump the bucket.

(Narrative continued.) When you got ready to dump into the wagon you would have to position the scoop right over the wagon. If you are digging a trench running this way, you would have to have the wagon on that angle. In other words, you would have to have the wagon at an angle to the trench, the same angle as the bucket hits it. You would have to have your bucket in the same direction generally as the boom of the attachment. When you trip the latch to dump this bucket you

have a certain amount of jar due to the downward fall of the scoop; but I want to say we seldom dump on trucks; always on a pile; I have had very little experience with that type of dumping in trucks;—this one I have.

Mr. Richey: By "that" he means P-15; and "this" he means P-17.

Q. In order to have the matter clear it is my understanding that in the operation of both this Clutter device of P-15, and the Downie device of P-17, you had one man to operate the lines for controlling the in and out movement and the digging movement of the scoop; he was up on the machine; and you had another man on the ground for tripping the latch for dumping; is that right? A. On a steam machine we had three men; a fireman, a man for dumping the bucket, if he was dumping; if he was not dumping he was on the side of the bank in case we hit a stone, a niggerhead or boulder he would come down and loosen it with the pick; and then there was the operator.

Q. Would you show the court in this Keystone machine what the position of the operator is, the man who is in the cab, what position he assumes, and state briefly what he has to do with the operation of the machine? A. Well, in the early model, No. 3, he had to stand up all day on one leg, the left one; he used both hands this way (indicating); and this foot was for swinging the machine. That was the operation. He had two levers all day long in his hands; he swung it underneath with his foot; and supported himself on the left leg.

Q. Could you let go one of those levers and drop the scoop? A. If you did that you would have to pull your hand all the way back with the brake and it would kick out. There is a dead spot there of 18 inches, on which there is neither brake or traction.

Q. That is, a dead spot on the quadrant over which the levers work? A. You had neither brake nor traction; it was free.

Q. In other words, you had to hold those handles all the time when operating? A. That is, on the No. 3.

Q. Now, how about the operation of the bucket type of device, similar to that shown in Plaintiff's Exhibit P-17; how did that compare with the operation of the Clutter device, such as that shown in P-15? A. Well, both machines operated the same, outside of on this later model the Keystone people had put a seat in there, to sit down on, and if I remember correctly on the boom that gave you a foot brake; so that if you wanted to hold the

boom up this way, you could hold it with that foot brake. But on the bucket line you still had no brake, and if you wanted to release that on the right side, you pulled the rope, the bucket would still kick out.

Q. Then as I understand it, it was the general practice—

Mr. Richey: Now, wait a minute, please. Don't lead him too much. I don't mind a litfle bit, but not too much.

Mr. Corbett: You better wait until you see what I say. You can object then. I think you will agree that what I am asking him he has already said, but I want to make it clear on the record you know.

Q. As I understand, in the operation of this Keystone machine, both the Clutter type of P-15 and the Downie type of P-17, it was customary to have at least two men to operate the machine, one for controlling the line and the other man for either tripping the latch or working around in case you were dumping on the spoil pile; is that correct?

Mr. Richey: Now, wait a minute. You have asked if it is customary. I am willing that he testify as far as he knows of his own knowledge, but as to what someone else done, he didn't see it, and I object to his testifying to what others may or may not have done.

Q. In answering that question, confine your answer to what you actually know. A. Well, some big contractors, that had a few extra men, they would give me three men, that is, including myself would be three; a man, if he wasn't dumping, which we seldom done, he would watch the bank and put cinders in for to get in back of us, and in general a utility man, to keep him busy. If I was working real hard, the fireman would have all he could do to keep the boiler hot.

Q. That is, in the steam machine? A. Yes, sir.

Q. And when you were dumping on the spoil bank, instead of in a wagon or truck, did you customarily open the bottom to dump the load, or did you throw the load out? A. Well, I would say in 90 per cent of the work, the dirt was just thrown out without opening the bucket.

Q. And the dirt came out of the same end of the bucket it went into; is that right? A. Yes.

Q. And when you did not operate that latch, of course, you didn't need a man for operating the latch? A. No.

Q. But when you operated the latch, you did need at least an operator in the cab on the machine, and a man for operating the latch; is that right? A. Well, the conditions would vary. If you had a few trucks to load, I wouldn't ask for an extra man; I would take the fireman. If that was to be a continual performance all day, I would have an extra man.

Q. And if you had a gasoline driven machine, when you didn't have a fireman, would you have to have another man besides yourself to operate the latch? A. Well, we generally have a handy man around to take care of oiling and greasing and loosening up the stones.

Q. I hand you Plaintiff's Exhibit P-18, which is a catalogue of the Keystone Driller Company, and ask you to glance through this catalogue and pick out any pictures which show a man in the machine and a man on the ground or operating the latch in dumping into a truck or wagon. A. Well, you want the skimmer type or the back hoe?

Q. I am referring to the back hoe type of attachment, and please give the pages of any such pictures that you may find.

Mr. Richey: It seems to me the pictures speak for themselves. He hasn't seen the machine being operated.

The Court: That is what I thought. What do you want to show—just what the pictures show in that catalogue?

Mr. Richey: Yes, that is apparently what he is asking for.

Mr. Corbett: Well, one of the points made in this decision in the Cleveland case was that this was a one-man control machine. Now, we want it absolutely clear, what this machine was.

Mr. Richey: It was perfectly clear in that case that we had an extra man to pull the latch. The whole thing was that that one man was operating the power line. That is all we claim.

The Court: That is all you claimed?

Mr. Richey: Yes.

Mr. Corbett: But the decision reads a little different, I believe.

The Court: The decision of Judge Jones, you mean?

Mr. Corbett: Yes.

Mr. Richey: These matters are fairly shown by the machine and appear in the record, and we see no occasion for making them meticulously clear.

Mr. Corbett: No, but we are doing our best to make them meticulously clear, if we can.

Q. I refer you again to Plaintiff's Exhibit P-18, and call your attention to the pictures on pages 28 and 29 of this bulletin, and ask you whether or not there is a man in the cab shown in that picture and a man on the ground for tripping the latch?

Mr. Richey: The same objection.

Mr. Corbett: I want to make this clear to the Court of Appeals, Your Honor.

The Court: Well, of course the picture—does it show it or not?

Mr. Corbett: Yes, it shows it, but we want to make it clear on the record.

The Court: Well, just dictate it to the record, then.

Mr. Richey: Yes, because he don't know what the man is doing.

Mr. Corbett: You will agree, won't you, that it does show a man in the cab?

Mr. Richey: Yes, a man in the cab, and two men on the ground.

Mr. Corbett: It shows one of the men on the ground tripping the latch. Isn't that right?

Mr. Richey: Well, I don't know whether it is or not. No, I think he has tripped the latch; that is my opinion.

Mr. Corbett: You admit it, don't you?

Mr. Richey: No, I will not do that; I don't know.

Mr. Corbett: Well, let the witness testify then.

Mr. Richey: He don't know; he didn't trip it.

Mr. Corbett: He can tell by this.

Mr. Richey: I will agree that the man tripped the latch, yes, if that is what you want me to do.

Mr. Corbett: Do you admit that that is shown on this picture?

Mr. Richey: They often use the man on tripping the latch.

Mr. Corbett: Your briefs, however, were pretty full of one-man control.

Mr. Richey: No, they weren't. One man to control the power line.

The Court: It seems to me that that is what he was there for, to pull that rope.

Mr. Corbett: May I have the answer from the witness?

The Court: Well, yes, I don't see that it can hurt any.

Witness: Yes, sir, two men in that.

Q. And one man is in the cab, and the other man is tripping the latch? A. One man is operating, and one man dumping the bucket.

The Court: That is your interpretation of the picture?

Mr. Richey: What is the other man doing, do you know?

Witness: Nothing; just getting his pay. He got fired.

Q. In this case, there has been quite a lot of discussion about what is called a blind spot in the Keystone back hoe. The substance of it is that when the boom gets to a certain elevation preparatory to dumping, that without the stops or abutments shown upon the sheave links of Plaintiff's Exhibit P-17, that if those abutments are not present, there is a danger that the operator will be unable to position the scoop in proper relation to the wagon or truck to effect accurate dumping.

Mr. Richey: I object to that as leading.

Mr. Corbett: I haven't asked him the question yet.

Mr. Richey: Haven't you got to the question yet? I beg your pardon.

Q. You have operated these shovels both with and without these stops. Have you in operating these shovels without these stops or abutments ever run across that blind spot in the elevated position of the bucket so that you could not get the proper position of the bucket over the wagon or truck?

Mr. Richey: I object to the question as leading.

The Court: I don't think so; I don't think that is leading. Let him answer it. You can cross examine him on that if you wish.

Mr. Richey: Counsel speaks like that, and then it is put in narrative form, and it looks like the witness has said all this.

Mr. Corbett: Well, if this question is going to hurt Mr. Richey, we will mark that in the record.

Q. Do you understand the question? A. Yes, I think I do.

Q. Well, please answer it the best you can. A. It has never made any difference if those blocks was there

or not in the operation of the scoop. It would go in and out just as fast, with or without it.

Q. Will you give your reasons, if any, that you have, why that occurs, so the court can understand what you was doing?

The Court: He said it never did occur.

Witness: It is all in the skill of the operator, how he handles that; if the blocks are there or not, don't make any difference. I have run it with the blocks and without the blocks, and I have never seen any difference in them.

The Court: Your notion is that those blocks are not any good on this machine?

Witness: Well, I never knew them to be any good. I could run them with or without them, just all the same. And I think every other operator could do the same.

Q. I hand you Plaintiff's Exhibit P-19, which is a group of four photographs which were before the court in the Byers suit, and ask you to examine these photographs and state whether or not in your opinion, from your knowledge as an operator, the scoops shown in these photographs are in the usual position for dumping? Please examine each photograph and answer as to each photograph. You will note in these photographs that there is a vertical pole with a representation of feet of elevation, and a horizontal pole with a representation of feet of horizontal distance of the scoop from the boom.

Mr. Corbett: I am correct in understanding those are feet—there is no question about that, is there, Mr. Richey?

Mr. Richey: I don't know.

(Last question read)

A. Where do you get the height of that; is that it right there (indicating)?

Q. These photographs are numbered respectively 15-E, 15-B, 15-C and 16-D, in the order in which they are handed to you. Do I understand you to say that you cannot read the height? A. No, I can't; my eyes are very poor.

Mr. Corbett: Will you agree, Mr. Richey, that the photograph 15-E—

Mr. Richey: Here are some glasses; maybe you can see with them.

Witness: Possibly; I doubt it. (Witness examines exhibit with glasses.) No, sir.

Mr. Richey: What is it you want now? Six feet horizontal and eleven feet vertical, is what I see here.

Mr. Corbett: You mean twelve feet, between twelve and thirteen is the bottom of the scoop, isn't it?

Mr. Richey: Yes, bottom of the scoop.

Q. The bottom of the scoop is between twelve and thirteen feet above the ground level, and the face of the boom is about five feet from the rear end of the scoop. Now, would you say that that was in a proper position? A. I wouldn't say that was in proper working position. It is just a trick photograph.

Mr. Richey: Well, I object to his opinion as to what kind of a photograph it is.

The Court: Yes.

Witness: I have dumped a truck from seven or eight feet possibly away from the machine.

Mr. Richey: Suppose the truck was on a bank or a hill?

Mr. Corbett: Just a moment—you will have a chance to cross examine.

Q. Why do you consider it desirable to have the scoop at a lower position? A. You have a whole lot better control of it, in a lower position of the bucket like that; you have better control of it.

Q. What do you mean by "control"? A. Well, if it is too high above the wagon and you dump it, that load would have to fall that distance, and it wouldn't be far enough away, and it would be apt to do quite a bit of damage.

Q. What do you mean by the matter of it not being far enough away from the boom—that is my understanding of what you said? A. Well, I have seen cases where the bucket—there is no bail on this as far as I can see; the bail was unhooked here—if you have a bail on, she couldn't get in that close.

Q. If you have a bail? A. If the cable was hooked onto the bail, she couldn't get anywhere near that close.

Q. Is it customary in digging with the Keystone device to dig in front of the wagon or at the side of the wagon; I mean in front of the machine, or at the side of the machine?

Mr. Richey: As far as he knows of his own knowledge.

Q. Yes, of your own knowledge, answer the question. A. Why, you always break in front of the machine, and the wagon is on the side.

Q. About where is the wagon ordinarily placed? A. Well, for myself I would place it about five feet outside of the caterpillar, and about six or seven feet ahead of it.

Q. Have you observed other operators placing the wagon; have you observed quite a number of them doing that? A. Yes, sir. If there was no obstruction they would usually place it in about the same position, if there was nothing in the way.

(Narrative continued.) As to whether it would be possible to place the wagon right opposite the tractor so that it would be practically even with the tractor, that is, with the traction member; that is, the front of the wagon being about the front of the traction member, well, that isn't done. It is usually placed out here five or six or seven feet away from the caterpillar, and about four or five out. You couldn't dig in front of the machine and put the truck in front of the machine too, you would either have to dig to the side and put the truck in front, or put the truck to the side and dig in front. I am quite sure that if the bail had been connected, it would have prevented this scoop from going in so closely to the boom. Referring to the scoop shown in the picture designated 15-B which is shown at a vertical elevation of between nine and ten feet from the ground and the rear of the scoop is about ten feet from the boom, I would say that was not the usual position for dumping. It is possibly a little bit lower, and a little bit to the side. I believe this is straight in front now. If you are digging from the center and you would dump off the side, that would be about the height, possibly a foot lower. That would be about the position.

Q. And referring to the photograph 15-C, this photograph shows that the scoop is between nine and ten feet above the ground, and that the rear end of the scoop is about between ten and eleven feet from the face of the boom. Would you say that that was about the usual elevation? A. For dumping the bucket myself, I would have it a little bit lower than this is; possibly a foot or two lower, and off to the side. That is in the center again, I believe.

Q. Going back to the photographs 15-B and 15-C, can you tell from those photographs whether or not the bail is connected in each of these photographs? A. 15-B the bail is not hooked up.

The Court: Well, as a matter of fact, the bail is not connected up in any of these photographs, is it?

Witness: 15-C, it isn't hooked up either.

The Court: Is it, Mr. Richey?

Mr. Richey: I can't tell, Your Honor. Is it, Mr. Downie?

Mr. R. R. Downie: It is disconnected on all of them.

Q. And in photograph 15-D, the bucket or scoop is shown at an elevation from the ground of between thirteen and fourteen feet, and its back end is shown at about eight feet from the face of the boom. Is that a usual position for dumping of the bucket or scoop? A. You refer to this dumping on a truck, not on a pile?

Q. In dumping on a truck or wagon? A. That would be out of position altogether.

Q. There has been something said in this case regarding momentum closure of the bottom of the scoop in the Keystone machine, by which is meant that by a movement of the stick, or possibly the stick and boom, the bottom is flipped shut. You are familiar with that, are you? A. Yes, sure.

Q. Was it your custom to use that? A. Well, when we were using it, very seldom. It was usually a trick of the operator to kick the arm and bucket together and close the door. Sometimes you would miss and try it again, and you would miss, and then you would get mad and dump the bucket down, and it would close itself.

Q. Have you had any experience before you operated the Keystone shovel, experience and knowledge of outstroke shovels? A. Oh, yes.

Q. Did you ever see any such flipping action in the outstroke shovel for closing the door? A. Well, it could be done when the bucket was out straight like that, but the usual operation was to bring the bucket close to the machine and the latch would move for this, and then you would shove it ahead.

Q. Did you ever see it done? A. Well, I have seen it done when there was dirt in the bucket. But you wouldn't close it that way. You would only do it like that when it was swinging it back like this (indicating).

Mr. Richey: He pulled his arm in towards himself, indicating that the bail was pulled in toward the shovel in that way. I simply want the record to show that.

Q. When you pulled the stick of the shovel back toward the boom, did the back of the scoop contact with the boom to effect this closure? A. Oh, no.

Q. Did not? A. No.

Q. The closure was effected, then, by the momentum of the backward movement of the stick; is that right? A. The bucket coming back like that, the latch would be up.

Q. Back towards the boom? A. Yes, and then the latch would slip right in there and lock.

Q. In other words, the backward movement of the shovel towards the boom was sufficient to cause that back to flap shut and be caught by the latch; is that right? A. Yes, sir.

Mr. Richey: Now, that is leading, Your Honor.

The Court: Well, where it is a fair summary of what he testified to, I think it is all right.

(Adjournment to 9:30 A. M., Friday, March 6, 1931.)

(March 6, 1931, 9:30 A. M., Hearing Resumed.)

DIRECT EXAMINATION by Mr. Corbett.

(Narrative continued.) I have used the type of back hoe shown in Plaintiff's Exhibit P-29 which is a photograph of the Osgood machine. Referring to this photograph and judging by the height of the traction members and the shovel in comparison with the height of the bottom of the scoop from the ground, I would say that the scoop in that position of elevation would more than clear any truck or wagon I have ever used. These trucks or wagons usually run from three feet to five and a half feet, possibly six feet. Referring to LeRoy P. Clutter type of Keystone back hoe illustrated by Plaintiff's Exhibit P-15, I have tried to break through solid rock with this machine, while I have taken out rotten rock, I never took out solid rock. I have actually tried to take out solid rock with it, encouraged by taking out a little rotten rock, and would continue on and batter away at that solid rock until something would break, until some part of the machine would break or the contractor would stop me. As to the parts and places where the breakage would occur, on different occasions I have had different parts break for me.

Q. Can you name some of those parts or indicate them on this model P-15?

Mr. Richey: Didn't we go over this yesterday?

The Court: I think so.

Mr. Corbett: I don't think we went over this very clearly, Your Honor.

The Court: Well, what is the use going over the Clutter machine? If you insist on it, go over it, but we are dealing with this later machine anyway, with stronger parts. And the plaintiff here is not claiming that it can quarry with this machine. What I understand they meant, when incidentally they strike hard rock or something, they go through with it. I would like to shorten it up, is all.

Mr. Corbett: I can show you places in the Byers record where the plaintiff said they dug through four or five inches of solid rock.

The Court: Well, they certainly were not trying out this later model machine. Assuming that some parts break in the ordinary use, it is strengthened, of course.

Q. Why is it that you seldom used the dumping action of the LeRoy Clutter pivoted scoop type of the Keystone structure? A. Well, the majority of the times we used the LeRoy Clutter back hoe, we were putting it on the spoil bank, and we would have quite a bit of trouble if we were continually dumping the scoop.

Q. In using the Keystone machine, have you ever had this Keystone machine demonstrated to you, or what is the custom, or what experience have you had in having Keystone excavators demonstrated to you? That is, how long do they do it, or do they do it at all? A. Well, I believe the usual thing is, they send a demonstrator—

The Court: Do you ever buy machines of this kind, or do you just work for somebody that does?

Witness: Working for somebody that did.

The Court: All right, go ahead.

Q. Is the machine demonstrated to you, or to the man who is buying it? A. It is demonstrated to the engineer, and to the contractor.

Q. In other words, the demonstrator shows you how to operate the machine; is that right? A. Shows us about the new features on it.

Q. And were you shown how to operate the Keystone machine that you have testified that you operated? A. The Downie patent I wasn't shown, as I had operated Keystone before, but I was told the new features of it by the demonstrator.

Q. When the demonstrator explained the new features, did he say anything to you about the feature of using that machine for rooting; that is, for permitting the bottom to be unlatched while digging with the side teeth? A. No.

Q. Have you ever attempted this rooting with the Keystone machine, or any other machine? A. Never have.

Q. Have you ever heard of it being done? A. Never have.

Mr. Richey: I object to that.

The Court: It is not very important—whether this witness ever heard about it.

Q. Do you know of any reason why this rooting should not be done with the drop bottom scoop of the type shown in P-17?

The Court: Now, what will the answer to that question mean, in the form you have gotten it—does he know of any reason for it?

Mr. Corbett: I want him to state it as his opinion, and I want him to show his reasons in order for the court to determine whether they are sound.

The Court: Well, if you want to ask what can be done with that machine, ask him that, if that is what you want.

Q. Can this rooting operation be performed in hard ground with this Keystone drop bottom machine of the type shown in P-17? A. Well, I have never seen it done and never heard about it, so I couldn't say.

Q. What was the nature of the soil at the demonstration lot the other day, as to the degree of hardness?

The Court: Well, it was made over soil, Mr. Corbett, probably as loose a kind of soil as you could get. I think everybody concedes that; had old bottles in it and bricks and everything else.

Mr. Corbett: All right.

Q. Will you briefly explain any differences in the matter of outreach of the Osgood machine in depositing upon a spoil bank—any differences between the Osgood machine and the Keystone excavator that you have operated? A. Well, I found that in the Keystone excavator, if you are going to dig in a deep trench, the bank kept caving in; I would have difficulty keeping the dirt far enough away from the edge of the bank, as I could only swing a quarter of the way off center.

The Court: What machine are you talking about now?

Witness: The Keystone.

The Court: Well, which one—the latest model?

Witness: No, these two. I haven't operated the latest model.

Q. Is it possible in the operation of the Keystone excavator that you have operated to throw the stick out over a high spoil bank and maintain it out? A. On the Clutter patent I couldn't. On the Downie patent I was a little more successful, but not all that would be desired.

Q. How about the Osgood device? A. Osgood device would always stay up just as I wanted it to.

Q. Do you know why that is? A. Well, the machine was bigger in proportion, and we had more leverage from the swivel pin to the end of the arm.

Q. Please indicate the swivel pin that you speak of? A. Being this pin right here, where the arm is attached to the boom.

Q. And you had more leverage on what machine? A. From this pin forward to the end of the boom.

Q. On the Keystone, or on the Osgood? A. On the Osgood.

Q. You had more leverage on the Osgood than you had on the Keystone machine? A. Yes, sir.

Q. Was the arm of the Osgood machine, that portion of the arm above the pivot of the Osgood machine, longer or shorter than that same portion of the Keystone machine? A. The arm was longer from the pin to the end of the arm, as I remember, and the A frame where the boom fall cable led back to the engine was much higher.

The Court: Have you finished?

Mr. Corbett: I am just checking up; there may be one or two things more.

The Court: Well, suppose we let Mr. Richey go ahead with his cross examination, and you can ask him later.

Mr. Corbett: All right.

Cross Examination by Mr. Richey.

I am employed at the present time by the Corson Construction Company. The labor unions have a rule in New York that you have to have two men on these machines, but they don't live up to it. It is the rule in a number of cases. On the gas machines of the Keystone, so far as digging in a trench is concerned, dislodging the spoil and scooping it up and getting it out of the trench, you do that with two levers. After you have got the arm swung around to where you want it dumped, you then

control again with the two hands as long as you are dumping by inversion.

Q. Now, all that is done by two power lines, isn't it? A. Well, I have seen three power lines here.

Q. Which three? A. One on the bucket and two on the boom.

Q. Well, these two, of course, are one line bent back. You call them three lines, but in effect this is only one line, just doubled back; that is right, isn't it? A. Yes.

Q. It is quite common to increase the power of the line by doubling it or trebling it or quadrupling it; that is correct, isn't it? A. That is true.

Q. But still you have only two lines controlled by the power? A. Yes, sir.

Q. The thing that trips the latch is, of course, the hand line, isn't it? A. Yes, sir, dump line they call it.

Q. And that is controlled by hand—a man just pulls that with his hand? A. If you are using the latch.

Q. Yes. Now, 90 per cent of the time you don't use that. A. I didn't.

Q. That is right, and when you do use it, you have some fellow around there, some roustabout or somebody of that sort, that pulls the latch when you get it over the wagon? A. That is true.

Q. Approximately how many thousand yards of material have you taken out with this Keystone machine? A. That is a very hard question to answer.

Q. Millions of them, wouldn't you say? A. Well, no, I wouldn't say millions; that is an awful lot of dirt.

Q. A million? A. No, I would say a couple hundred thousand. That is an awful lot, too.

Q. That is the long time you have worked at it? A. Quite a while. You are referring to this type of machine?

Q. Yes, I am referring to the Keystone machine now. Now, the device we used out there at the dumping grounds; of course we used an electric trip, and you didn't have to have a man to pull the trip line, did you? A. As far as I could see, you didn't.

Q. No, that also was done by the operator? A. Yes.

Q. You spoke of mashing in the sides of the ditch yesterday. That is a very inconvenient thing to happen, isn't it? A. Mashing in the side?

Q. Yes. Didn't you say sometimes you get the machine so close to the ditch that it caused the side to cave in? A. Oh, yes, the backfilling operation.

Q. Yes, that is a very inconvenient thing, isn't it? A. That is not a usual thing, but it will happen; something you have to watch out for.

Q. Still you do backfilling with the Keystone machine, don't you, particularly on small ditches? A. I didn't hear you.

Q. I say, you do use the Keystone machine to backfill, don't you? A. Keystone machine to backfill—yes.

Q. And those two photographs I show you here, they illustrate that operation, don't they? A. Yes, they illustrate that operation.

Q. You have used the machine in that manner to backfill, haven't you? A. Not very often, I haven't.

Mr. Richey: I ask that those be marked for identification as Plaintiff's Exhibits P-42 and 43.

Q. Now, when you do mash in, you have to dig it out again, don't you? (No response.)

Q. Could you hear that? A. Yes—you say when I did mash it in I have to dig it out; just what do you mean?

Q. Well, the side of the bank? A. Well, if that fell in when you are backfilling, you just move away.

Q. Well, but ordinarily isn't it true that with the forward arc trouble you sometimes do mash in the sides? A. Not when you are excavating for the trench, because you are on solid ground. You are in back of the trench.

Q. Well, I am talking about the forward arc now; when you have to put it on a mat, you sometimes mash it in? A. The Keystone didn't have that.

Q. I am talking about the forward arc now—any forward arc. A. On a steam shovel?

Q. Yes. A. Would you be backfilling or digging trench?

Q. Digging trench. A. You would run the pontoons over the trench.

Q. Well, but sometimes even then you force them in, don't you? A. Yes, the weight of the machine would force the bank to fall in.

Q. Your work has been done over in New York, hasn't it? A. Most of it.

Q. Where else have you worked with this Keystone machine? A. Bristol, Pennsylvania.

Q. Well, this New York district is very hard rock down there, isn't it? A. Yes.

Q. What is it, do you know; is it granite or sandstone or limestone? A. It is a granite rock.

Q. Granite rock? A. Yes.

Q. Now, that is a good deal harder than shale or slate, isn't it? A. I am not acquainted with either one of the two, so I couldn't say.

Q. But you know that is one of the hardest rocks in the country? A. Possibly.

Q. Manhattan Island is almost one solid rock, isn't it? A. Yes, sir, one hundred feet down about from the surface.

Q. It is the same rock all along the Hudson River on the east side as you go up there on the New York Central, isn't it? A. Not on the east side.

Q. Yes, east side. West side is sandstone, that is where the Palisades are, but the east side— A. Yes, that is right.

Q. Now, these boulders in the hard pan—are the boulders the same kind of rock as the island; that is, is that granite, too? A. No, you wouldn't call it granite, the boulders or hard pan; niggerheads.

Q. But that is a very hard glacial rock, isn't it? A. It is.

Q. How big are they? A. They vary from two inches to five yards.

Q. Where they are small, you can dig them with the ditcher, can't you? A. Well, on two or three inches possibly, you can; six inches sometimes they might stick you.

Q. Well, sometimes when they are quite big you can do it? A. I wouldn't call six inches big.

Q. What is the filler that is in among those rocks? A. It is very hard to dig.

Q. Kind of blue clay? A. No, just a hard dirt, but it is solid.

Q. But you can dig in that as long as the boulders are not too big? A. Yes.

Q. How deep are the strata of the hard pan? A. Well, I have excavated to 22 or 23 feet, and they are still hard pan.

Q. Now, you said you did do some digging in this granite with these ditchers yesterday, but finally the parts broke? A. Yes, sir.

Q. Did you do any execution between the time you started on the granite and the time the parts broke? A. What do you mean, execution?

Q. Well, did you get any rock loose? A. Well, possibly; maybe I might have had a yard out, or half a yard.

Q. So you did do some digging, but the parts were too light? A. If you would call it some digging—I had a hundred yards to dig out, and I could only dig a half yard out.

Q. Well, now, you blast that, don't you? A. That is drilled and blasted.

Q. Do you then get in there with one of these diggers and get out the loose parts? A. Yes, if it blasted small enough.

Q. And sometimes you dislodge that that has just been loosened up, don't you, by digging it loose? A. Not the solid rock.

Q. Now, after you blast it, I mean? A. Oh, yes, then you dig out quite a bit of it; in fact, all of it, if you keep at it long enough.

Q. You spoke yesterday of using this Keystone machine with and without these abutments up here? A. That is true.

Q. Did you ever have occasion to take those abutments off? A. No, I didn't.

Q. Never took any of them off? A. No.

Q. Kept right on, left them on there; for year after year you left the abutments on? A. I wouldn't say year after year, because, two years I run one of that type and later on we had one with the blocks, and I could never see any difference in either one.

Q. But you never took them off? A. No, never did.

Q. You never took one of them off and put the sheave on, did you? A. When you say "took them off," did you mean to chop these blocks off, or just to spread the rod to put the sheave in?

Q. Well, did you ever remove the abutments at all? A. Yes, both of them can be removed.

Q. And then you put them back on again? A. Yes.

Q. Sometimes you do digging off the center line of the machine, don't you? A. On very rare occasions.

Q. Well, now, I show you a photograph here; there the wagon is shown in the center line of the machine, isn't it? A. That is true.

Q. And the machine has been digging to the side? A. It so indicates.

Q. Of course, it is possible to dig that way with this Keystone machine, isn't it? A. Yes, it is.

Q. Just the same as digging in the center line and dumping on the side, except of course as to the position? A. If you were doing that type of work. I never did that type of work.

Mr. Richey: This may be marked for identification Plaintiff's Exhibit No. 44.

Q. Now, in this forward arc machine, that is, the steam shovel type, it is the back of the boom that is pivoted, isn't it? A. The upper back of the bucket, not the lower.

Q. Not the bottom? A. No.

Q. Now, the way of closing that, as you described it yesterday, is that you swing the scoop back towards the machine, don't you? A. To working position.

Q. To working position; and as it passes the bottom of the arc and comes up, the back is closed by gravity; that is right, isn't it? A. Closes itself.

Q. Yes, by gravity? A. Yes.

Q. Did you say you never had done any undercutting with this Keystone machine? A. If you will explain what you mean by undercutting, I might possibly answer.

Q. Well, did you see that demonstration out there the other day when Mr. Elmire cut under on one side of the trench; that is, he made the trench wider at the bottom than at the top; did you see that? A. I noticed the trench was wider at the bottom, but I don't think it was from undercutting.

Q. Well, did you see him doing that? A. No, I don't believe I did.

Q. You didn't see that? A. I was looking; he might have done it, but I didn't see it.

Q. Well, now, if you are laying a pipe line, and you encounter a telephone pole down in the direction of your pipe line, you can either dig your line straight under the pole or bend it around the pole, can't you? A. You can't run a pipe around the pole. It must be right in line.

Q. Must keep in line? A. Exactly.

Q. You either have to move the pole, or put your ditch under it, don't you? A. Exactly.

Q. Now, do you consider it would be an advantage if the machine could dig a trench around the pole and then get under the pole so the pipe line could get under the pole? A. Well, how deep would this pipe be?

Q. Well, any reasonable depth? A. Well, reasonable depth—let's say 15 feet?

Q. Yes. A. No, you couldn't.

Q. Couldn't do that? A. No.

Q. You never tried it? A. I have tried it; I know it can't be done.

Q. Do you say that Mr. Elmire never saw you do that? A. Yes. That would be to a depth of 15 feet.

Q. Well, all right; now let us say 10 feet. Did you ever undercut a pole 10 feet? A.. Undercut a pole at 10 feet?

Q. Yes, or anything of that kind? A. Not that I can remember.

Q. You don't remember? A. I don't.

Q. You do know Mr. Elmire, don't you? A. From the spare part department in New Jersey.

Q. He has been over there and seen you work on this machine, hasn't he? A. He told me he has.

Q. You don't remember seeing him around there? A. I know men of the Keystone Company have watched me, but I don't know who they are; I wasn't interested.

Q. And you wouldn't say that he didn't watch you? A. No, I wouldn't.

Q. And you cannot say that Mr. Downie has not watched you? A. No, I wouldn't, because I don't know.

Q. Now, what is this rotten rock you worked in down there? Is that this granite that has been aged by weather? A. Well, there might be a little seam, or something that has been mixed in, that you could break away.

Q. You don't know how hard that is in comparison with shale? A. No, I don't know anything about what shale is.

Q. Well, sandstone? A. We would always consider that rotten rock, too.

Q. This rotten rock is about like sandstone? A. Right close to it; different in appearance but—

Q. Now, in straight digging in soil with this Keystone machine, you are able to operate that with accuracy both in the digging and in the unloading, aren't you? You are good enough to do that, aren't you? A. I was, yes.

Q. Now, your written testimony shows this—I don't know whether this is what you said or not, or what you intended to say. You said, we had almost the same difficulty with No. 3 as we had with No. 4. Outside of the door, this latch wouldn't stay closed. We put a block of wood to hold it there; every time you hit something hard down at the bottom the door would open. Now, do you mean to say that every time you hit something hard, the door would open? A. No.

Q. You didn't mean to say every time? A. Wherever the pins were worn.

Q. That is when the pins were worn? A. Yes.

Q. After you had been digging in the granite and wore the pins, why then the bottom would fly open? A. Yes.

Q. But normally that wouldn't do that? A. According to the conditions you were digging; if it was blasted rock, it might open once a week; if sand, maybe once in two or three or six months.

Q. Just where did you place that block of wood that you were speaking about? A. Just about there (indicating).

Q. Looking at Fig. 2 of this Clutter drawing, you mean to say you put it right in there between the spring 13 and the ditcher stick; that is right, isn't it? A. There is a block placed the whole length of the slot to keep that catch from jumping out of the lock.

Q. That would be at point 16-A, slot 16-A? A. Yes.

Q. And during what operation was it that you put that block in there? A. Whenever the digging was real hard.

Q. When you would try to dig in the granite? A. No, not necessarily in hard pan, but we hit a boulder in it, and there would be a sudden strain, she would kick out.

Q. That is, you would hit one of these boulders, and she would kick out? A. Yes. And as a usual thing in hard pan you had boulders.

Q. But in ordinary work, you didn't need it? A. Ordinary work—we kept it in all the time.

Q. Just as a matter of precaution? A. Well, to keep you away from trouble.

Q. But when you were digging and dumping in wagons in ordinary work, you didn't need that? A. We done very little, that I can remember of, dumping into wagons with that type.

Q. With the Clutter? A. With the Clutter.

Q. And of course when you were dumping on the spoil bank, you didn't need that slot, and you just left the wood in there? A. Well, the wood was on, yes, the time that I run we kept the block in there so we wouldn't have that delay.

Q. Of course, in your digging you might strike one of these boulders, and if you were not going to dump any way on wagons you wouldn't need the slot, so you just left the block in there; that is right, isn't it? A. I found

the machine and the scoop operated better and with less delay, by keeping that block in there at all times.

Q. You said you used the Osgood machine like shown in one of the Exhibits handed to you here? A. Yes.

Q. How long have you used that? A. Between five and six years.

Q. You have been working with it lately, have you? A. With the crane boom lately.

Mr. Richey: That is all, Your Honor.

Mr. Corbett: That is all, Your Honor.

Pearl Davis, a witness called by defendants, being first duly sworn, testified as follows:

Direct Examination by Mr. Corbett.

My name is Pearl Davis. I am forty years old. I live at Columbus, Ohio. I am engaged in the excavating business for myself. I am a contractor. We do road work, sewer work, cellar—any kind of earth movement. I have had experience in trench digging. I have been a contractor for fifteen years. I have used Keystone back hoe machines. I have used machines of the types shown in models Plaintiff's Exhibits P-15 and P-17.

The Court: How long have you been in the business?

Witness: Fifteen years as a contractor. Of course, I have followed it ever since I was twelve years old; that is, in this kind of work.

(Narrative continued.) I only attempted to use the Keystone machine for undercutting once. And on this occasion, we bent the boom. The boom was bent so badly, that we had to buy another boom.

The Court: What model was that?

Witness: That was a Model 4.

The Court: How long ago?

Witness: In 1921, the machine was bought in 1919.

(Narrative continued.) This happened on the machine of the Model 4—it come out in 1919 with that bucket like is on that furthest model over there (indicating Plaintiff's Exhibit P-15). We operated the machine of the type shown in Plaintiff's Exhibit P-15 from 1919 to 1922. We used it for loading into wagons, but we had a lot of trouble with the bucket in dropping it, and dumping it and hitting the side of the wagon, and tearing the side of the wagon.

The Court: Well, that is the Clutter machine?

Witness: That is the Clutter machine.

The Court: Exhibit P-15?

Witness: Yes, sir. At that time we didn't have the trucks to dump in. Your wagon bed is only three foot and two inches wide, and it is bad to dump in. If you got it up high enough to miss the bed, so the bottom wouldn't hit the bed, then you missed some on this side of the line, or on the other side.

The Court: Ever try to put it in the wagon lengthwise?

Witness: You couldn't get your wagon around to put it in lengthwise, because if you have to put it around there, you have no control over the bucket, or to a certain extent; you have some control, but if you got your bucket out there, and you have a man with his back to you, you are liable to knock him in the head.

The Court: Wouldn't do very much good, would it?

Witness: No, sir.

(Narrative continued.) I have operated this Keystone machine in sand and gravel and in just ordinary loam. I have tried to dig rock with both of these machines, near Columbus in Franklin County. We didn't have so very much success in solid rock, you couldn't dig it; it is out of the question to dig. The only rock you can operate the machine successfully in is in heavy boulders; what I mean, around Columbus there, they have a lot of gravel, it runs anywhere from an inch to four inches in diameter. You could operate in that, but if it got bigger, you couldn't operate in it. We had four machines of the back hoe type. Two of each type. When we bought these machines, the second, third and fourth were demonstrated to us. Each machine was demonstrated for five days. Now, wait a minute, I am wrong. The first and second machines we had demonstrations on, or the second and third, we had demonstrations on, and on the fourth one, they just shipped it in and we done our own demonstrating. On the second and third machines, we had a man demonstrating it five days. The second was a Clutter type machine, the same as is shown in Plaintiff's Exhibit P-15. The third was of a Downie type, such as shown in Plaintiff's Exhibit P-17, except that the third machine we got didn't have the stops on. During the five days' demonstration on each of these machines, nothing was ever said by the demonstrator about operating this shovel for rooting, that is, permitting the bottom to become un-

latched, and digging first with the side teeth, and then closing the bottom and completing the digging. Neither was undercutting explained to us at any time by these demonstrators. I have operated a Keystone machine of the type shown in Plaintiff's Exhibit P-17 without stops and I have operated this type of machine with stops. I could not see any difference in the operation between the device with the stops and the device without the stops. I never had any trouble in loading into wagons with the device without stops due to any blind spot, nor the hanging up of the boom on the stick in the elevated position of the boom.

The Court: Did you ever strike a blind spot?

Witness: I never heard tell about the blind spot until I heard them talking in this court about it.

(Narrative continued.) I operated this machine without stops for about two years. In all that time I never heard tell about the blind spot. I never had any trouble getting the scoop down into position for dumping onto a wagon, but we did have some trouble—we had a sewer and we was putting in a 36 inch pipe, and we was cutting kind of a blue gumbo out, and it was muddy and wet down in there, and when we got that bucket full of that gumbo you couldn't dump it on account it would get out between the teeth and the bail, and you would have to get it over to the wagon or truck, and you would have to jerk it there, and of course you haven't got much control over it when you jerk it up and down. I found the drop bottom scoop satisfactory in dry dirt or gravel. We use the drop bottom scoop all the time, that is, we dump out of the drop bottom scoop practically all the time. In the work that we have, we dump very little on the spoil bank, we dump into wagons.

I have heard the discussion here about undercutting, and about undercutting under a stone, tree or pole. The demonstrators we had never explained that feature of the Keystone back hoe to us. I have tried to do that and I explained what success we had before. In the operation of the latch to trip the bucket on these machines it was customary to use a man on the ground to pull the latch.

The Court: Lot of stone and slate north of Columbus, isn't there?

Witness: Yes, sir.

The Court: Couldn't use this shovel or any of these shovels in there?

Witness: No.

(Narrative continued.) I never attempted to dig concrete with this shovel, this back hoe. I have attempted to strike a hammer blow with the machine, by manipulating the boom and fall line. In striking this blow you would not let go of the hoisting line entirely, you would throw the bucket out as far as you could so it would drop, straight up and down, on the teeth, and just before it struck, you had to catch some of the weight of the boom, because if you didn't the bottom of the support knuckled in, and it would break those pins off there. I am speaking more about that Clutter type over there. If you let go of the line entirely, the hoisting line, and attempted to extend the scoop out with its points down to perform a picking action with it, it would break the joint through, that is, this thing here. And the first one we had had this rigging on it.

Mr. Corbett: Referring to upstanding support for sheaves.

(Narrative continued.) And the next one we had had those taken off, and this sheave set back here, and no support back here at all, but the same kind of bucket. And that up there, this going up there with this knocked off, because this has a chance to drop down in between the two parts there.

Mr. Corbett: Speaking about the sheaves dropping down in between the boom.

(Continuing) And it goes over the center, that is what I mean.

Q. This bucket would go up higher than the line of your boom? A. Yes, sir, drop down in there, and it breaks these pins off here, shears those off here.

The Court: That is in the old Clutter machine?

Witness: Yes, sir.

The Court: Did it do it on the next model?

Witness: No, it didn't do it so bad in this model as it did on that one. This model here, you can get it out—it all depends on the size of the bucket you have, and how far out you can get your bucket. Take a small bucket, and it will extend it further this way than it will with a large bucket. You take a large bucket, and the weight of it holds it in there.

(Narrative continued.) We didn't have much experience with throwing out on the spoil bank with it. We had some experience with picking or hammering with the drop bottom bucket. We found in digging or anything, if you had a very large bucket, you bent those pins, that hit in here, that is, the pivot pins of the drop bottom. Then you had trouble with your buckets staying latched. That is, in any hard pan or boulders or gravel like you have around Columbus. I couldn't say definitely how often we had to renew the pivot pins in this drop bottom, but I would say in real hard stuff, digging in hard stuff, you might have to change the pins maybe once a day and maybe twice a day, and then maybe you wouldn't change them for a month.

The Court: You carried those pins with you right along?

Witness: Yes, carried them right along, because the agent there told us that is where he had the trouble; he kept the pins in stock for that.

(Narrative continued.) These pins cost about a dollar and a quarter apiece. I have operated an outstroke shovel, that is, a regular steam or gas shovel, in which the shovel operates outwardly from the machine. I would say that my actual operation of that type of a shovel would amount in all to about a year's time. The bucket in that type of machine you close by manipulating the stick, either up or down. You can close it in two ways. You can pull her up and drop her down—I am talking about the outstroke machine now. You pull your stick and bucket up pretty fast, that is, get a momentum on it, and stop.

The Court: Crack the whip.

Witness: Yes, and then you can drop it down and stop it real quickly, and put it up there. From there you can manipulate it either way, up or down, and latch the bucket.

Q. How does your repair bill run on these machines?

Mr. Richey: Oh, I think that is immaterial. We do not claim the machines don't wear out.

Mr. Corbett: Well, it shows, Your Honor, what the capability of the machine is.

The Court: Oh, let him answer it. What do your repair bills run? It depends on the kind of job, I suppose?

Witness: Yes, it depends on the kind of work and the job. The first job we did was very tough digging, right out there in the vicinity where you was talking about, and we worked 100 days out there, and our repair bills was $1200; that is, $12 a day.

The Court: You charge that up to the job, I suppose?

Witness: Yes, that is charged to the job. That was on the second machine that we had.

Mr. Corbett: That is all.

Cross Examination by Mr. Richey.

This job I just spoke about, this $12 a day job for repairs, we were working in—part of was just loam, part of it was gravel, that is, gravel from the size of an inch on up anywhere from four to six inches in size, and then part of it was solid stone. The machine we were using was the Model 4 machine, steam wheel, and had the Clutter bucket on it. The machine at that time was two months old, a new machine. This had a Clutter bucket on the No. 4 machine, that is the bucket that came out with it—it didn't have this bucket when we bought that in 1919. I don't remember what the names of the demonstrators of our machines were. They did not come out of the Columbus office, they came directly from the factory. I couldn't just name the time these fellows demonstrated the machine; the first one that we bought from the Keystone Driller Company was in 1919, in the winter. The second machine was demonstrated in the summer of —I wouldn't say whether it was '22 or '23; it was between '22 and '23 in the summer time. I don't know the name of the man who made the demonstration. There was no third demonstration. The first machine that was demonstrated was the Clutter machine No. 4, with the Clutter bucket. The second machine was the No. 4 with the drop bottom scoop. I tried this undercutting once and bent my boom. We were just trying to undercut kind of a hard pan. That boom I would say was, somewhere between nine months and a year old. I was the man who was trying to do the undercutting. I had no experience in undercutting before that.

The Court: Would you say that is a rather difficult operation? You have to learn to do it, don't you?

Witness: Well, I can't see where it is to any advantage, for any undercutting of anything, because you

couldn't undercut to lay a pipe or anything; it has got to be done by hand, and when we have always done any of that work, we just go up to it and then dig around it, and put laborers in there.

The Court: What I am trying to get at, undercutting is rather an expert thing; a fellow would not be able to do it until after a good deal of experience, would he?

Witness: Well, anybody that could operate a Keystone could drop his bucket in to get where he was cutting and leave his line loose—that is, his boom line, and swing it over as far as he could, to pull the top of his boom over. The idea of undercutting is to pull the top of the boom over and throw your bucket into the bank where you want to cut.

The Court: Well, it seems to me it is a rather difficult operation; I don't know.

Witness: Well, it is in a way. It isn't practical; that is the idea about it. It is not practical to do that.

(Narrative continued.) Sometimes only part of a pipe will go under a tree. Under those circumstances it is of some advantage to undercut. You can undercut in soft dirt, where the soil is soft, where you are not going over say five or six feet deep, why you can undercut more then than by going down deeper; but in undercutting, you know a sewer or anything, you have to carry a man along to keep your grade and keep it level so the pipe will be laid anyhow. You have got to have a man like that along, because you couldn't just dig it with a machine and lay the pipe in, because they have to be inspected and put in right to the grade and all that, and so you have to have a man along.

Q. Now, in this demonstration of the machine with the Clutter bucket on it, did that man demonstrate to you how to dump in a wagon? A. Yes.

Q. Was he successful in dumping in the wagon? A. Not any more than I was, or any other operator that I had after that.

Q. And your contention is that as far as the dumping feature of the Clutter is concerned, it was no good because you couldn't dump in a wagon anyway? A. You couldn't get it stopped just right to dump into a wagon.

Q. Did you use it to dump in a wagon? A. Yes.

Q. Notwithstanding that fault? A. Well, we had to use it for dumping into a wagon.

Q. And you did dump in the wagon with it? A. Yes, but it wasn't satisfactory.

Q. It wasn't perfect, you mean? A. No, it wasn't perfect.

Q. You could spot your load, but you couldn't dump it accurately? A. You couldn't dump it accurately.

Q. And that is because when you twist the latch, why the bucket kicks— A. Yes.

Q. Out of the position in which you placed it? A. Yes.

Q. And you couldn't always judge the amount of the kick? A. No, you couldn't do that exactly.

Q. But still you continued to use it—for how long did you continue to use it for dumping in wagons? A. Well, we used it for, I would say—well, off and on, for two years.

Q. Well, now, of course Columbus is a level country, isn't it? A. Well, yes, usually.

Q. And most of your dumping in wagons is when the wagons are on about the same level with the machine; isn't that right? A. Yes.

Q. You don't often have wagons on a hillside or anything of that kind? A. No.

Q. You sometimes dump into trucks, don't you? A. Yes.

Q. And how high are they? A. Well, a truck is—there is different sizes in trucks, but they have got them very near standardized now, and they clear the bed—it clears about, well I would say from five foot and a half to six foot and a half.

Q. You said you never heard of this blind spot. You don't want to be understood as denying that there is such a thing in the operation of this machine, do you? A. Well, I mean that I never found a blind spot in it, and never heard anybody say anything about blind spot until I come here.

Q. But you don't deny that there is such a thing in the machine? A. I have never found it.

Q. That isn't my question. You don't want to be understood as saying that there is no such a thing?

The Court: Well, his position is that he never saw it.

Mr. Richey: All right, I will withdraw the question. That is all.

Mr. Corbett: That is all.

GEORGE E. TURNER, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Corbett.

My name is George E. Turner. I live at New Lexington, Ohio. I am sixty-three years old. I am an engineer and a manager.

Q. Will you state your education and experience along mechanical lines, particularly with relationship to such experience and education that might qualify you to testify in this suit relating to back hoe attachments. A. I left High School when I was 16 years of age, and for a short term of two or three months was employed with the Norris & Christian Lime Stone Company, producers of lime, and my first duty was to run a hoisting engine which drew the cars from the pit up to the top of the kilns. About that time the Marion Steam Shovel Company was just organized and ready to commence operation, and I was called there and took the same kind of employment for a short time, in operating the old steam plant. This plant had been an old planing mill, and was taken temporarily to start this works, and the same old steam plant was retained to furnish the power for such tools as they had set into this old building in the way of machine shop tools. The old planing mill equipment had been removed. This was a part of the present ground where that plant is located. About six months I operated this old steam plant; this was starting in in 1884. And then I signed up an apprenticeship contract, existing in those days, which later went out, and that was for three years in the works, and that entitled one the privilege to a boy, under that kind of a contract, to use all of the devices and tools that they would have when they started or might secure during any time of that term, and to work on any or all parts of the shovels which they were building. That carried with it also some work in the foundry; in those days apprentices had to shift about on certain days, and some experience in the pattern department, working on patterns. And at the close of the period, after something like three years and six months, about 1888, with other, I organized the Electric Light & Power Company, and constructed that plant.

The Court: At what place—Marion?

The Witness: Marion, Ohio, Marion County.

During the latter portion of that period, which extended for eight years, from 1888 to about 1896, with

some of the same people I organized the Marion Street Railway Company, built that plant and continued with it for two years, as manager of both of those companies. At the close of that period, about 1896, I went with the Engineering Company at Bucyrus, Ohio, there designing one or two boilers in steam plants. About 1900 I was called back to the Marion Steam Shovel Company plant at Marion, Ohio, for a period which was supposed to be rather temporary, or only for one year, but which resulted in a span of four years. At that time this plant was restricted to a somewhat smaller area than it is now, although they owned the land and held it in reserve on which to make enlargements. I was asked to take charge of that work, in laying out the plant construction and handling the enlargements, and it was thought that that might only last a year, but it resulted in the continuation there, a continual building program and enlargement of the work for about four years. That meant, of course, the laying out of the different plants, different drawings and plans, with tracks, and how the work might be routed, and so forth, and so it took considerable time, and finally resulted in a great portion of what is now that company's works. That is, especially in the neighborhood there of the Union Station.

The Court: Right along the tracks?

The Witness: Right along the tracks as you go through town, the first portion, and they had previously to that, right across from the Union Station.

Q. What did you do after that; what was your next period? A. After that, I then went, at the close of this period, about 1904, with the Bellefontaine Foundry & Machine Company at Bellefontaine, Ohio. That was a company that done foundry work, and there I built ditcher dredges. These ditcher dredges were used in the land drainage work in the central western states during the period when there was a great deal of that work done. At the close of that period, and up to about 1914, some four years, I was engaged with three different construction companies in the West, in the construction and use of dredges to dry land, and the actual drawing of those contracts in the land drainage districts at different places.

At the close of that period, 1914, I went to the United Iron Works Company, with offices at that time in Springfield, Missouri, and later in Kansas City, Missouri. At

the close of that period, about 1920, I came to my present position and took charge—with the Kehota Mining Company at Pittsburgh—and took charge of the Three Strip Coal Mining properties in that county. The same people had another works similar to that over in Eastern Ohio, and insofar as the engineering and mechanical work is concerned, I had charge of the equipment there, too. These plants were equipped with seven or eight extremely large stripping shovels, and a similar number of smaller shovels that were used to raise the coal and dump it into cars after delivery from the tipple, after the top soil and rock and dirt had been removed.

The reason I was called there was that these shovels had developed considerable weaknesses—very large—and these were not minor parts, but heavy, extremely large parts, and my work for some time was simply to take these up and develop new or stronger parts, after working in preparation of the manufacture at Marion, Ohio, and endeavoring to get those parts replaced. Of course, whatever happened to one of these machines would happen very soon with all the others if kept in operation, and the plant program was to head that off, in a measure, and get these parts in rapidly enough to save a shutdown when these larger breakdowns occurred. The difference in strip mining and underground mining is that when that sort of thing happens the operation stops, and your mine stops; they have no output and nothing to market, and go off the map so far as that is concerned. So it was necessary to head that off. My work during this period, the first four or five years, was in that kind of work, and during that time I devised some forty or fifty parts. Some of those have been patented and disposed of, some were not; and this resulted later in bringing out a new model of that machine, somewhat larger and stronger, involving a great many of these improvements, so that in the future you wouldn't have that same trouble. The old models, of course, were continued to be used, reconstructed and rebuilt, and parts secured for them.

Q. What knowledge have you of patents, if any, Mr. Turner? A. During my association with these different companies I have at times applied for patents, and secured them, especially during my term with the United Iron Works, where I was in charge of the sales and engineering of both ditching machines and foundry equipment; they brought into my department the patent appli-

cations of which they wished to make a study. This company manufactured a great many different things, and were constantly looking into new machines of various types, and these things I would go over, and also make estimates of the possibilities of the machine, compare them with other machines, make estimates to see whether they might be manufactured with any profit, determining whether there was a market, and that class of work.

Q. Have you read the patent of LeRoy Clutter, No. 1,317,431? A. I have.

Q. And do you understand it? A. Yes.

Q. I direct your attention to claim 4 in this Clutter patent, and ask you to briefly point out the elements of the Clutter device which are literally described by this claim.

Mr. Richey: Has he seen the Clutter device operated?

Mr. Corbett: Are you asking him, or asking me?

Mr. Richey: Well, I thought I would ask you.

Mr. Corbett: You ask him.

Mr. Richey:

Q. Have you seen any of these Clutter machines operate, Mr. Turner? A. I have seen Keystone machines operate; I don't know whether it is a Clutter or not, in the days I was looking at them.

Q. You don't know which type machine it was? A. No, I wouldn't say, I have seen a good many of them, and I just know it was a Keystone machine.

Mr. Richey: Well, now, you brought this question up yesterday on qualification.

Mr. Corbett: No, you brought it up on cross.

Mr. Richey: If Your Honor please, this brings up quite a question, and as I said before, it has been the common practice in these patent cases to have a man testify about the operation of a machine from these drawings, although he has never seen the machine operate. Now that has come about, I think, in this way: They used to file models in the Patent Office, but the men down there got so they could tell the operation of a machine from the drawing better than they could from the model, and so they actually discontinued the filing of the model. And in the Byers case you will find in the record that men testified about these machines and their operations without ever having seen the machines.

Now, I don't want to impose upon any situation by objecting to a man testifying about a machine because

he has not seen it operate, but if that is going to be the ruling, I think it ought to work both ways.

Mr. Corbett: Your witness testified here yesterday when he had not seen it operate, didn't he?

Mr. Richey: Yes.

Mr. Corbett: What is the point you are trying to make then?

Mr. Richey: I am trying to make this point: That you objected yourself to Mr. Sessions testifying when I asked a similar question of him, because he had not seen the machine. You know, as well as I know, that in these patent cases, ever since we have been practicing, experts have testified to machines, how they operate, that never saw them before. And you know that has been done in this court; you know that is true and Mr. Reed knows that is true. Now, we had to get around and set up a hypothetical question to get that evidence in. If that is going to be the rule, let's go through with it, but I am telling the court what the practice is.

Mr. Corbett: Is that all an objection to this witness answering this question?

Mr. Richey: My objection now is that we must follow the rule both ways, or not at all. And here is a man that comes forward to testify to the Keystone machine. He don't know whether he saw one or not.

Mr. Corbett: Did you say, Mr. Turner, whether you ever saw one of these machines?

The Witness: I don't know what the names were of the patents.

Mr. Corbett: Well, you have seen Keystone machines since, haven't you?

The Witness: A lot of them, yes.

Mr. Corbett: What types of machine were they?

The Witness: These various types.

Mr. Richey: Did you ever see a Clutter machine?

The Witness: I have seen a great many of them; I saw them in the early days; I didn't know it was a Clutter or what it was.

Mr. Richey: Of course, if he has seen a Clutter machine operate, that is all right.

The Witness: I don't know whether it was Clutter or what it was.

Mr. Corbett: I think we would get along much faster if Mr. Richey reserves his questions until the regular cross examination time.

The Court: Well, suppose you ask him about that.

Mr. Corbett:

Q. Just state what experience you have had in seeing this Keystone operate, if you have seen the Keystone machine operate? A. Yes, I have, a number of times, on a good many occasions.

Q. Where? A. Well, I used to travel around a great deal in this work where I saw machines and watched them, and I have seen the skimmer machines and Keystone type—it might be Keystone in the early days when I first saw them. Of course, I would stop and watch them work, that is the reason I would see them.

Q. As a matter of fact, haven't you in the past several weeks? A. Yes, in the past three or four weeks I have seen a number of them.

Q. And you observed them carefully? A. Yes, sir.

Mr. Richey: Have you seen a machine like that of the Clutter patent? That is what you were asking him.

Mr. Corbett: No, I didn't ask him to check the claims of the Clutter patent.

Mr. Richey: I object to that for another reason. In the first place that is the function of the court.

Mr. Corbett: I didn't ask him to interpret the claim, but just point out the elements of the claim.

Mr. Richey: That is the function of the court.

The Court: Well, Mr. Corbett, if I haven't gotten that much out of this case up to this time, I have been wasting my time. It tells what it is here.

Mr. Richey: The interpretation of the claim and the application of the claim is the function of the court, just like the interpretation of a contract. Of course, the application of the claim is the interpretation of the language of that claim in connection with that device. Now, there is no better established rule in the patent practice in the courts than that the interpretation of the claim and the application of the claim is the function of the court.

The Court: It would have to be.

Mr. Richey: The function of an expert is to explain to the court what the machine is and how it operates and what it does in his opinion, and anyway, as I said a while ago, that is whether he has seen the machine operate or not. That goes to the weight of the evidence.

The Court: Well, that is what I ruled yesterday, or day before.

Mr. Richey: Well, if that is the understanding, all right. That is the practice, Your Honor, as I under-

stand it and as I have experienced it, and that is what I am willing to abide by. With all due deference to Your Honor, I didn't think the ruling yesterday was correct. But we got around it by asking a hypothetical question. But we are going to save ourselves a lot of time probably if we go ahead and let these experts go ahead and explain them, but not interpret the claims.

Mr. Corbett: All I want to do is to have this witness point out the elements or features of this device which respond to this claim literally interpreted.

The Court: All right, go ahead.

Mr. Richey: Will Your Honor please grant me an exception to the witness reading the claim of the drawing or undertaking to interpret it?

The Court: Certainly.

Mr. Corbett: Your Honor, I want to say that we have got a few charts here for the purpose of facilitating your labor; one of the most difficult things in patent work is to read these patents laboriously. Now, we have here some colored charts, simply to assist the court in that respect, that is all.

The Court: All right.

Mr. Richey: This man doesn't know the rules of equivalency or the rules of interpretation of a claim in connection with the specification, purely legal points, which incapacitates him from applying any claims to the drawing, or explaining what they mean.

Mr. Corbett: You seem to be rather fearful of this.

Mr. Richey: Well, I am fearful of a man that don't know anything about the patent law, to tell the court what the patent law is.

The Court: Well, now, what is your question?

Mr. Corbett:

Q. Please read the claim 4 of this Clutter patent and apply the literal language of it to the elements of the structure of the LeRoy Clutter patent 1,317,431.

The Court: Well, I agree with Mr. Richey about that, but go ahead. I don't see why I can't do that, and save a lot of time.

Q. Just briefly enumerate the elements. A. In this patent No. 1,317,431, LeRoy P. Clutter, there is disclosed a boom marked 15, pivoted to the bottom, to raise and lower, but it doesn't appear here—

Q. Well, just take the claim of the Clutter patent and read each element and point it out in this structure, is all.

The Court: Well, that is first a pivoted boom; you have pointed that out.

The Witness: Yes.

The Court: A scoop carrying member pivotally connected therewith.

The Witness: In orange here.

The Court; A pulling member for elevating and lowering the said boom.

The Witness: In black.

The Court: And a pivotal means carried by the boom connecting the pulling member therewith.

The Witness: That is this construction here.

The Court: And said scoop-carrying member, a scoop connected with the scoop-carrying member and projecting toward the boom.

The Witness: In blue here, marked 3.

The Court: And a pulling member connected with said scoop.

The Witness: 23 here.

Q. Have you read, and are you familiar with, the patents listed in defendant's answer in connection with this Clutter patent No. 1,317,431? A. I have.

Q. Will you point out to the court the structure and operation of some of the prior patents on back hoe devices which are listed in that answer?

Mr. Richey: I am not objecting to his describing the operation of this machine he has not seen, on the theory that our experts can do the same thing, Your Honor.

The Court: All right.

Mr. Mahoney: At this time, Your Honor, I want to offer in evidence Defendants' Exhibit 62.

The Court: That is, the patents pleaded in the answer?

Mr. Mahoney: Yes, sir.

The Witness: Now, the first one here, E. O. Rood, ditching dredge and excavating machine, patented July 17, 1888, disclosed a boom marked 6 in red, pivoted in its lower end to raise and lower, a stick, orange in color, marked 13, pivoted at the outer end of the boom at a point between its ends and scoop, blue, B, attached to the stick in a rigid manner, pulling member 22 attached to the scoop, and the hoisting member 16 attached to the stick, and lower end to sheave 17 in the upper end of the boom.

The Court: Now, was this patent in the Byers litigation in Cleveland?

Mr. Richey: Yes, sir.

The Court: This patent was?

Mr. Richey: This Rood patent?

The Court: Yes.

Mr. Richey: Yes, that was there, and evidence regarding the machine.

The Court: Every time you get to one of those patents, I would like to know whether it was in the Cleveland suit.

Mr. Richey: Yes, this is one of the patents the Court of Appeals referred to.

The Witness: The second one, Your Honor, A. B. Weber, steam shovel excavator, patented October 30, 1894. Here the boom in red, a handle, or stick sometimes called, in orange, pivoted between its ends, bucket in blue, rigidly attached to the lower end, a member, not marked but shown here passing up from sheaves that are marked 18.

Mr. Corbett: That patent, or patent similar to that, was in the Cleveland suit, and in addition, we are offering here some practical testimony, in addition to the machine. But the testimony or depositions about the operation of the machine were not in the Cleveland suit.

The Court: Did Mr. Turner testify in the Cleveland case?

Mr. Corbett: No.

Mr. Richey: There was testimony in the Cleveland case about the operation of that Weber machine, wasn't there?

Mr. Mahoney: No, I don't think so. There was one machine they talked about.

Mr. Corbett: I think you confuse that machine with the Marion machine in the Cleveland case.

The Witness: The third, G. W. King, steam shovel excavator, patented March 30, 1897. Here we have the boom in red marked D, another portion over here extending out, a member across here, all in red; we have a handle in orange pivoted at the upper end of this boom between the ends of the handle, a bucket, blue, in the bottom marked M, rigidly attached to a member. We have here a member, both pulling and hoisting member, marked N.

Mr. Corbett: This patent was not in the Cleveland suit, Your Honor.

The Court: Is that correct, Mr. Richey?

Mr. Richey: I think that is right.

The Witness: This one is a British patent, Jubbs, A. D. 1903, issued May 20, No. 11496. Here the boom is shown marked A in red, a handle in orange pivoted in this boom, points between the ends of the handle, those being marked J, the scoop marked K, blue, with the lower end arranged to adjust here on the handle slightly, a hoisting and pulling member marked 6.

Mr. Corbett: That patent was not in the Cleveland suit, Your Honor.

The Witness: This one, O. J. Olson, deceased, power shovel, No. 826,051, patented July 17, 1906, a boom in red marked 13, pivoted at its lower end to raise and lower, a stick in orange pivoted between its outer ends and the boom, bucket in blue marked 25, a pulling line 28, a hoisting line marked 14.

Mr. Corbett: That patent was in the Cleveland suit, Your Honor.

The Witness: The next one, J. G. Fairbanks, excavator, No. 892,508, patented July 7, 1908; a boom in red marked 15, pivoted at the support of its lower end, but not pivoted to rise and fall; a handle, in orange, pivoted between its ends and outer end of the boom; a scoop in the lower end marked 49 in blue, a pulling line marked 56, attached to the open end of the scoop, a line 22, a hoisting line shown here in black, attached here, and an additional line here attached to the upper end of the handle, the other end attached to the lower end, center of the rod around brake mechanism.

Mr. Corbett: That patent was in the Cleveland suit, and there was a catalog picture of it, but no explanation of people familiar with it, and we have taken depositions of a man or men who operated that machine.

Mr. Richey: Your Honor, of course we dispute the argument. It was in the Cleveland suit.

Mr. Corbett: I have said it was in the Cleveland suit.

The Witness: The next one, C. W. Rood, excavating machine, 1,057,457, patented April 1, 1913. Here is a boom in red, marked C, pivoted at its lower end and held at the top, another boom marked E, pivoted near the lower end of the first boom in red, a construction here, a dipper handle made up of two bars marked G, or two pairs of bars, on the lower end of this a boom, blue, marked F, a hauling line marked H, and hoisting line marked I.

Mr. Corbett: That patent was in the Cleveland suit, Your Honor.

The Witness: J. G. Fairbanks, No. 1,056,268, patented March 18, 1913; boom marked 7, an arm from this boom marked 11, both in red, a triangular shaped handle or stick in orange marked 12, a scoop or bucket in blue marked 16, a hauling or pulling line marked 24, a hoisting line marked 22, and third line marked 23.

Mr. Corbett: If Your Honor please, I made an erroneous statement there. The depositions which we took, that was not in the Cleveland suit, relate to the operation of this Fairbanks machine, by the man who actually operated it, so that it is this Fairbanks, No. 1,056,268.

Mr. Richey: Well, there was testimony in the Cleveland suit about the use of that machine.

Mr. Corbett: There may have been something taken from the catalog. But these depositions are by the men who run the machines.

Mr. Richey: Well, there was testimony of its use and where and how it was used.

Mr. Mahoney: Only in the catalog.

The Witness: This one, S. M. Bishop, power shovel, 1,100,804, patented June 23, 1914. A boom marked F in red, pivoted at the lower end to raise and lower, a handle in orange marked Y, pivoted at the upper end to the boom, a line marked 7 and attached to the outer end of the boom, a hoist line, and another line V attached to one end of the scoop, the scoop in blue marked X.

Mr. Corbett: This patent was in the Cleveland suit, Your Honor.

The Court: Both of the Fairbanks patents were in the Cleveland suit?

Mr. Corbett: Yes.

The Witness: H. L. & W. Sweet, and C. B. F. Hutchins, excavating machine 1,208,230, patented December 12, 1916. Here a triangular boom in red 57, a handle marked 69, orange, pivoted between its ends and the outer end of the boom, a scoop marked 79, and attached to the lower end rigidly through a brace 82, a hauling or pulling member attached to the forward or open end of the scoop, a hoist member 84, shown here, a third member, marked 71, attached to the upper end of the handle above the pivot point.

That completes the eleven.

The Court: Well, that is ten, isn't it?

The Witness: Well, I was not counting Clutter.

The Court: Well, you have gone over ten prior art patents.

The Witness: Yes.

Mr. Edgerton: The last one was in the Cleveland suit, Your Honor.

The Court: Well, then, all of them were in the Cleveland suit except 3 and 4 of your list there.

Mr. Corbett: We are trying to give Your Honor a few of the prior art patents with relation to the back hoe.

The Court: Are there some other prior art back hoes?

Mr. Corbett: Oh, yes.

The Court: How many?

Mr. Corbett: Oh, probably as many as we have looked over here.

The Court: As many more?

Mr. Corbett: Yes. Your Honor, this witness is going to discuss and explain some of the machines, back hoe machines, prior art back hoe machines, that have actually been operated, and about which we wish to offer depositions at this time. We would like to offer the depositions, and if Your Honor is willing, we would like, in the case of probably three or four of these depositions, to read parts of the depositions to the court so as to give the court a clear understanding of the machines about which the expert is going to testify, and which he is going to compare with the patent in suit.

The Court: Well, I prefer you read the whole deposition; then I won't have to go over it again.

Mr. Corbett: All right, Your Honor, if you would rather do that. There are some parts, of course, of every deposition that are not important.

The Court: Well, if it is not important that I should ever read it, just say so. Just as you choose.

Mr. Corbett: Well, it is just a matter of time saving.

The Court: I know; you are quite right about it, every deposition has a lot of things in it that turn out to be unimportant.

Mr. Corbett: I only want to read three or four depositions, and we will go right to them.

The Court: All right.

The Witness: Your Honor, there are eleven in here. There is one that we didn't refer to. There is one here we didn't get in the record there. Some of these charts have one on one side and one on the other, and this is one that I missed.

The Court: Is this the Mahoney?

The Witness: D. H. Mahoney.

Mr. Corbett: The situation in the Cleveland suit about this Mahoney patent was this, Your Honor. The Mahoney patent was cited in the Cleveland suit by the defendant, and the plaintiff thereupon took depositions to carry back the date of the Clutter invention back of the filing date of the Mahoney patent, and the defendant in that suit took no depositions in refutation of that. Now, in this case we have depositions. As a matter of fact, we have some nineteen or twenty depositions, some of which are corroborative as to the amount of ground dug and various things of that kind.

The Court: Dating this back of Clutter?

Mr. Corbett: Dating this patent back of Clutter, yes, sir.

The Court: All right; go ahead.

The Witness: D. H. Mahoney, No. 1,194,204, a ditch machine, patented August 8, 1916. A boom 27 in red, pivoted at the lower end. A ditcher stick marked 40, pivoted between its ends in the outer end of the boom, a scoop, blue, marked 38, at the lower end of the handle, a pulling line 50 attached to the open end of the scoop, a hoist line marked 14, attached to the boom, and in one part to the handle, the lower end, and a line shown here in green, 34.

Mr. Corbett: Your Honor, at this time, if you are willing, we would like to offer this Mahoney deposition and read the deposition to you. Could we withdraw the witness pending that?

The Court: Certainly.

Mr. Mahoney: I hereby offer the deposition of Daniel H. Mahoney in evidence.

The Court: This is the deposition of the inventor, is it?

Mr. Mahoney: Yes, this is the deposition of the inventor, and we have a great many supporting depositions, testifying about the machine.

Mr. Corbett: Your Honor, I want to say in connection with this deposition that there are some photographs in evidence as exhibits in the deposition, and we have enlargements of these devices, and if there is no objection, we will put the enlargements on here, and let you have the original exhibits.

Mr. Mahoney: I am offering in evidence in connection with the deposition Defendants' Exhibits 1 to 9, inclusive, that were offered in evidence during the taking of the deposition.

The Court: Any objection to any of these Exhibits, Mr. Richey?

Mr. Richey: Any statements of fact in the Exhibits we object to as hearsay, unless they are corroborated by the witness. This catalog—I don't know what is in it.

Mr. Mahoney: In the course of the taking of the depositions there are a number of objections made by counsel.

The Court: Well, then I will hold those over.

Mr. Richey: I think I ought to say that our position on the Cleveland case record is that their claim was double-barrelled, with reference to this Mahoney patent. The Court of Appeals didn't mention it.

Mr. Corbett: Their record shows, as we see it, that after the taking of depositions by the plaintiff to carry back the date of Clutter, back of Mahoney, the Mahoney patent was never urged by the defendant against the Clutter patent. It was used in the suit against the Wagner patent, which was a later patent, but was never carried back.

Mr. Richey: Well, his position with respect to Mahoney and Wagner was substantially the same as his position wth respect to Clutter.

Mr. Corbett: We will argue that the Wagner patent is an entirely different patent. The Wagner patent, of course, is not in this suit.

The Court: The Wagner patent is what?

Mr. Richey: Is not in suit here.

Mr. Corbett: It was in Cleveland, but not here.

Mr. Richey: The outstanding difference was that Wagner did not have a link here; (indicating on diagram).

Mr. Corbett: There were other features that were not involved in that case. I might say also in the Cleveland suit, there was much talk about the Mahoney machine not being a commercial machine.

The Court: Not a commercial success?

Mr. Corbett: Not a commercial success, but no information whatever about the operation of that machine was before that court.

DEPOSITIONS FOR THE DEFENDANTS
Taken at Cincinnati, Ohio.

NOTICE OF TAKING TESTIMONY.

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Cleveland, Ohio.
Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of Daniel H. Mahoney who resides at North Bend, Ohio, more than one hundred (100) miles from the place of trial herein, for use on behalf of the defendant at the final hearing of this cause, before Helen Williams, a notary public in and for the county of Hamilton, Ohio, who is not of counsel nor interested in this cause, at the office of Helen Williams, Room No. 1107, Union Trust Building, Cincinnati, Ohio, on the 10th day of September, 1929, at ten o'clock a. m., and thereafter from day to day as the taking of the deposition may be adjourned; and such testimony will be so taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross-examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated at Columbus, Ohio, this 5th day of September, 1929.

Service of the foregoing Notice hereby acknowledged.

P. E. SIGGERS,
Attorney for Plaintiff.

PRINTER'S NOTE:

A like Notice was issued on behalf of The General Excavator Company and was signed by Mr. Edward L. Reed.

The following deposition was taken on behalf of both defendants, pursuant to the above notice, at the office of Helen Williams, a notary public, Room 1107, Union Trust Building, Cincinnati, Ohio, commencing at ten o'clock a. m., Tuesday, September 10, 1929. Counsel for all parties being present.

DANIEL H. MAHONEY, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Daniel H. Mahoney. I reside at North Bend, Ohio. My age is 75 years. At the present time I have no occupation. Prior to the year 1900 I was railroading, that is, supervisor on the Baltimore and Ohio Railroad. I was in charge of maintenance of way—charge of track men; laboring men on the railroad. I worked for them until 1905, twenty-four years and five months. I left their employ in March, 1905. I am not related to counsel for The Osgood Company conducting this examination. After I left the Baltimore and Ohio Railroad Company, I went with The Mahoney Railway Ditching Machine Company. I was one of the organizers of that company. This company was organized or incorporated in 1903, and was engaged in manufacturing railroad track ditchers—roadbed ditchers. I now produce a catalogue to show the kind of machines this company was manufacturing and selling. This is one of the catalogs that was used to solicit business for The Mahoney Railway Ditching Machine Company.

Mr. Mahoney: Catalog just produced and identified by the witness is hereby offered in evidence as Defendants' Exhibit 1, Mahoney Railroad Ditching Machine Company catalog.

(Narrative continued.) The Mahoney Railroad Ditching Machine Company was a successful company up to 1911. After that it began to play out, the orders didn't come in for it, not fast enough to keep a shop going. The railroad ditcher shown in our catalog, Defendants' Exhibit 1, was a patented machine. I was the inventor of the railroad ditcher shown in this catalog and obtained United States Letters Patent therefor. When the business of The Mahoney Railroad Ditching Machine Company began to fall off, I started on what was called a land ditcher. By land ditcher I mean something other than a

railroad ditcher. This first land ditcher I tried to make on the order of the railroad ditcher, cut and dump on one side. The photograph just handed me is a Mahoney Railroad Ditching Machine Company's circular. It represents the first ditcher that I made after the railway ditcher. This photograph is a true and correct representation of the first other than railroad ditcher designed and manufactured by me. Referring to this photograph, I am able to identify one of the persons shown on the right hand side as Patrick Lanahan. The man to the right of the machine is Mr. Lanahan.

Mr. Corbett: This is the same machine here (referring to enlarged chart).

The Court: You are talking about Exhibit 2?

Mr. Mahoney: Yes.

(Narrative continued.) I have indicated the position of this man by the letter "A" on the photograph. Referring again to the photograph on the left hand side of this circular I identify the man on the machine as my son, Walter Mahoney. He died in 1918.

Mr. Mahoney: The photograph of The Mahoney Railroad Ditching Machine Company circular just identified by the witness is hereby offered in evidence as "Defendants' Exhibit No. 2," and the Notary is requested to mark the same "Photograph of Mahoney Railroad Ditching Machine Circular Side Ditching Machine."

Mr. Edgerton: The Exhibit No. 2 is objected to as being irrelevant, incompetent, insufficiently proven, and as secondary evidence.

(Narrative continued.) I would like to correct my statement about the date of my son's death. I think he died in the fall of 1917. Referring to the machine shown in Defendants' Exhibit No. 2 the scoop on this machine had a hinged door. Referring to the photograph in Defendants' Exhibit 2 on the right hand side I recall that it was taken at Perry D. Green Addition, Vincennes, Indiana, New Road Sewer. This machine was used on the Perry D. Green road in the summer of 1911.

I am the inventor Daniel H. Mahoney referred to in the printed copy of United States Letters Patent 1,194,204, issued August 8, 1916, on an application filed February 10, 1915, which has just been handed to me.

Mr. Mahoney: The printed copy of United States Letters Patent 1,194,204, issued August 8,

1916, is hereby offered in evidence as Defendants' Exhibit No. 3, and the Notary is requested to mark the same: "Printed Copy of United States Letters Patent, 1,194,204, dated August 8, 1916."

(Narrative continued.) I built the machine shown in Mahoney patent 1,194,204, dated August 8, 1916.

Referring back to Defendants' Exhibit No. 2 the machine shown in that exhibit could not be used for dumping in the wagons. It had some other objectionable features. It wouldn't throw the material to both sides.

I commenced to build the machine shown and described in the Mahoney patent 1,194,204, in the year 1912. This machine was tested out several times in the year 1913 and was completed in that year. The completed machine of the type shown in United States Letters Patent 1,194,204 was first used at Gorham, Illinois. Before this machine was taken to Gorham, Illinois, I took it down south of Vincennes on a ditch, and tested it out there. This machine worked all right on this ditch. The only trouble I had was the power attachment. The traction engine leaked and gave me lots of trouble, and I had to bring it in but the machine did the excavating work satisfactory. It done the work well, the machine itself did. My best recollection of the date that this machine was used on the farm south of Vincennes, Indiana, is that it was the summer of 1913.

The photograph which has just been handed to me represents the ditching machine shown in the Letters Patent. This photograph was taken on some ditch work south of Vincennes, Indiana. It was taken on the same ditch work which I have referred to as having taken place on the farm south of Vincennes in the summer of the year 1913. This photograph truly and correctly shows the machine that was used by me in the summer of 1913, on the ditching work on the farm south of Vincennes, Indiana.

Referring to Defendants' Exhibit No. 1 the photographs shown on the last two pages of this catalog is the machine which was used by me in the summer of 1913 on the farm south of Vincennes, Indiana.

Mr. Mahoney: The photograph which the witness has just identified as being photograph of the machine used by him in the summer of 1913 on a farm south of Vincennes, Indiana, is hereby offered in evidence as Defendants' Exhibit No. 4, and the Notary is requested to mark the same: "Photo-

graph of the Mahoney Ditching Machine used on farm south of Vincennes, Indiana."

(Narrative continued.) Referring to Defendants' Exhibit 4 the scoop was moved toward the machine in order to fill. This would be called an in-stroke ditcher. The machine had a pivoted boom, pivoted at the base. The scoop-carrying member was pivotally connected with the boom. The scoop-carrying member or ditcher stick extended above its point of pivotal connection with the boom. The scoop was connected with the scoop-carrying member or ditcher stick, by a bail connected to the dipper, and the dipper stick. The connection of the bail with the scoop was a pivotal connection. The upper end of the scoop-carrying member or ditcher stick had a pivotal link thereon. The location of the pivotal link I will mark on the photograph with the letter "A". This link had a sheave at the other end of it. This machine shown in Exhibit No. 4 had means for raising and lowering the boom. It was capable of loading into wagons or depositing on the ground, either one, or on either side of the ditch.

In operating this machine the dipper was thrown back, to the position back here, from the machine, and then drawn forward by cables toward the machine, in that way, then lifted by drums and swung to either side, whichever side the operator desired. When the scoop was up it was dumped by being tipped from the back to the front with a line to the man on the machine.

This machine was operated on the farm south of Vincennes in the ditching operation heretofore mentioned, by Walter Mahoney. I was present at the operation. I do not remember any other persons present at that time excepting Walter. To remedy the condition caused by connecting the steam line between the tractor and my machine, we brought the machine back to Vincennes and put a steam boiler on it, the machine proper. After that the machine had its own power plant thereon. After we placed the boiler on this machine we took it to Gorham, Illinois, to dig a ditch. The reason we took it to Gorham, Illinois, was that a party had a contract at Gorham for digging ditches, and he had some hard material to cut, and he asked me to go down with him. The man's name was William Volmer. This machine was taken to Gorham, Illinois, for this work in October, 1913. The part of the drainage work at Gorham that this machine worked on was called a lateral ditch. The work on this lateral

ditch began at the main ditch, a ditch to drain into the main ditch. My machine started the work on this lateral ditch at or near the main ditch. They tried with teams first, and it was gumbo; they couldn't cut around. When my machine was brought there for ditching very little had been done, and what was started wasn't completed by the teams. I would estimate that the work done by the teams before I got there, well fifty feet in length wasn't completed. My machine completed the work on this ditch. We cut about eleven or twelve hundred feet. Walter Mahoney operated this machine at Gorham. I was there to start the machine in on the work, and saw it operating there. I was there on two different occasions while the machine was digging this ditch. At the time my machine was brought out there for Mr. Volmer a man accompanied me. He was Mr. Volmer's man, Barekman. There was two other men from Vincennes, Indiana, that went to Gorham, Illinois, to see this machine while it was being used on this particular job, August Bovy, and an engineer there, I don't just recall his name. I remember now that his name was Lind.

(At this point reading of the deposition was stopped for the noon recess.)

(Friday afternoon session, March 6, 1931.)

(Reading of deposition continued.) I cannot tell exactly how long it took to complete this lateral ditch with my machine at Gorham, Illinois. It might have been a couple of weeks' working time, but the machine was down there a couple of months. Mr. Volmer paid for the work and sent the machine back to Vincennes. The ditch was completed by my machine. The soil at this point was gumbo mud, very hard to excavate and hard to discharge from the dipper. My machine done very well under these conditions, done the work.

The next job upon which this machine was used was at Vincennes, Indiana, digging a sewer for the city. J. J. Quinn was the contractor. My machine began the work on this sewer system for J. J. Quinn at Vincennes in 1914, in June, I am satisfied June is right. The photograph just handed me represents the machine that dug the sewers at Vincennes, Indiana. This photograph shows my machine. I recognize the buildings in the photograph there as being on Buntin Street, in Vincennes, Indiana.

This photograph truly and correctly shows the machine that done the work for Quinn at Vincennes, Indiana, in June, 1914. The ditch shown in the photograph was actually dug by this machine, and the photograph was taken while the machine was in the actual digging of this particular sewer system at Vincennes, in June, 1914. The photograph shows the same machine which was used at Gorham, Illinois. In this photograph I recognize my son and myself and John Leahy. I mark my son's position in the photograph by letter "A". My own position in the photograph I mark with the letter "B". Mr. Leahy's position I mark with the letter "C".

Mr. Mahoney: The photograph which has just been identified by the witness as being the photograph of the actual machine used at Gorham, Illinois, and at Vincennes, Indiana, is hereby offered in evidence, and Notary is requested to mark the same: Defendants' Exhibit No. 5, Photograph of Mahoney In-Stroke Ditcher used at Gorham, Illinois, and Vincennes, Indiana.

Mr. Edgerton: The photograph Exhibit No. 5 is obviously a photograph made from another photograph. We, therefore, call for the production of the original photograph and object to Exhibit No. 5 as secondary evidence.

Mr. Reed: The witness has testified that the photograph Exhibit No. 5 correctly illustrates the machine built by him and used at Gorham, Illinois, and at Vincennes, Indiana, and that the photograph was made while the machine was on the job at Vincennes. The photograph is competent for this purpose, regardless of whether it is an original or reproduction.

The Court: That is this Exhibit 5 objected to?

Mr. Mahoney: Yes.

The Court: Are you still objecting to that, Mr. Richey?

Mr. Edgerton: The photograph was objected to only as to secondary evidence; in other words, what they introduced at that time was obviously a photograph made from another photograph. Later, they developed the original photograph.

Mr. Richey: We are not objecting to it any more.

The Court: All right. You are not objecting to any of these exhibits from 1 to 5, then, as I understand it.

Mr. Richey: No, Your Honor.

(Narrative continued.) The photograph now handed me is the same ditching machine working at Vincennes excavating a sewer for large sewer tile, I think they were five feet. My machine excavated the ditch shown in this photograph. I was present nearly every day while my machine was digging the ditches of the sewer system at Vincennes for J. J. Quinn. Walter Mahoney operated this machine while it was being used for Quinn at Vincennes. This photograph was taken while the work was being excavated, and truly and correctly shows the machine used at Vincennes beginning June, 1914, for J. J. Quinn.

Mr. Mahoney: The photograph which has just been identified by the witness as being a photograph of the Mahoney Ditching Machine used at Vincennes, Indiana, in digging sewers for J. J. Quinn, beginning June, 1914, is hereby offered in evidence and the Notary is requested to mark it: "Defendants' Exhibit No. 6, Photograph of Daniel Mahoney Ditching Machine excavating large ditch."

(Narrative continued.) The ditching at Vincennes was on one ditch on different streets, all one ditch. This ditch did not have laterals connecting to the main ditch. My machine worked on the main ditch. I don't know whether I can recall any of the other streets on which this machine operated at Vincennes. I know all the streets well enough. Buntin is one, and Main Street was another and Hart Street. I couldn't recall all the streets now. My machine completed this work for Mr. Quinn and I was paid for the work. I think this work was completed for Quinn in October, 1914. While ditching for Quinn on this particular job my machine was used quite often for dumping the dirt into wagons. I saw very little of Mr. Quinn while working on this job, but his foreman, John Leary, was very enthusiastic over the machine and said he certainly would recommend it. I am pretty positive Leary was his name.

As to the help received from The Mahoney Railroad Ditching Machine Company for the development and building of the machine shown in Defendants' Exhibits 4, 5 and 6, the company had a small amount of money in the bank and after that became exhausted I got no assistance. The money I received from the company was not sufficient to pay for time, labor and material to build this machine. I used my own money. After the com-

pletion of the work on the storm sewer system at Vincennes for J. J. Quinn this machine was taken to Westphalia, Indiana, and put to work in a ditch similar to the one at Gorham. I don't remember the name of the particular ditch on which it was used at Westphalia. It was a lateral ditch from a large ditch. Walter Mahoney operated this machine at Westphalia. The machine completed the ditch at Westphalia. The men were paid for this ditch at Westphalia. I got nothing out of it. The men were paid in accordance with the first contract made with a man named Stein, for team work. The machine used at Westphalia was the same machine shown in Defendants' Exhibit No. 5. As to the date that the machine shown in Defendants' Exhibit 5 was used for digging the ditch at Westphalia, it was taken there in October, put to work in October, 1914. I would say that it finished the work there about December. I left there and took employment with the railroad company at St. Louis before that was finished. I was out of means and had to go to work there on that account. The company I was with didn't furnish me any money. After the machine shown in Defendants' Exhibit 5 completed the work at Westphalia, Indiana, it was sold up in the country. I don't know the party. It was sold by Mr. Watson in our company. I do not know the present location of the machine. I have never been up there.

Q. Did you ever receive any orders or inquiries for a machine like that shown in your United States Letters Patent No. 1,194,204? A. I received an inquiry from the Oliver Brothers, New York.

Q. Can you produce the original letter from Oliver Brothers making this inquiry? A. I'll see. (Witness produces a letter.)

(Mr. Mahoney hands letter to court.)

The Court: It seems to be a carbon copy, Mr. Mahoney. How does that happen?

Mr. Mahoney: I don't know, Your Honor. It will probably appear here about this.

The Court: All right, go ahead.

Q. Is this the letter you refer to as having been received from Oliver Brothers, New York? A. It is.

Q. Will you please refer to this letter and state the date thereof and to whom it was addressed? A. This letter is dated October 31, 1914, and it is addressed to the Mahoney Railroad Ditching Machinery Co., Vincennes, Indiana.

Q. Was that letter actually received by the Mahoney Railroad Ditching Company? A. Yes, we received this letter.

Q. Was an answer ever made to that letter from Oliver Brothers? A. I think I have an answer, yes. Let's see.

(Witness produces answer.)

(Mr. Mahoney hands letter to court.)

Q. Was this letter which you have just produced mailed to Oliver Brothers, if you know? A. Yes. This is a copy of the letter.

Q. Is that a carbon copy, an exact carbon copy made at the time the original letter was made? A. I think it is.

Mr. Mahoney: The letter from Oliver Brothers just produced and identified by the witness is hereby offered in evidence as Defendants' Exhibit No. 7 and the notary is requested to mark the same: Letter from Oliver Brothers, New York, dated October 31, 1914, to the Mahoney Railroad Ditching Machine Company, Vincennes, Indiana. The letter dated December 1, 1914, from the Mahoney Railroad Ditching Machine Co. to the Oliver Brothers Purchasing Company, New York, is hereby offered in evidence as Defendants' Exhibit No. 8, and the notary is requested to mark the same: Answer of Mahoney Railroad Ditching Machine Co. to letter from Oliver Brothers dated October 31, 1914.

The Court: How far do you claim your patents date back?

Mr. Richey: I beg your pardon, Your Honor, the Clutter patents?

The Court: Any one of them.

Mr. Richey: The Clutter patents, I don't remember the date of the filing of the application, but in the Cleveland case we showed it went as far back as April, 1914.

Mr. Corbett: Are you going to show that here?

Mr. Richey: I think you about admitted it.

Mr. Corbett: No, no. You will have to prove it in this case. We will cross examine those witnesses if you are going to prove it.

Mr. Richey: I don't know whether it will be necessary.

The Court: April, 1914?

Mr. Richey: Yes, that is what we showed in that case.

Mr. Corbett: His filing date was February, 1915; that was a day later than the filing date of the Mahoney patent.

The Court: The filing date here is February 11, 1915.

Mr. Richey: I think Your Honor has in mind what our defense is against these things—they do not embody invention.

The Court: That is one of them.

Mr. Richey: I think most of them are back of us. The patents are back of anything that Mr. Clutter did.

Mr. Corbett: Unless you prove it.

Mr. Richey: We agreed to that and have been over it. As far as most of these machines—Clutter had three machines, and then the patented machine.

Mr. Corbett: You mean Mahoney.

Mr. Richey: Mahoney, I mean; and I think the three machines are back of the filing date of Clutter, and two of them are back of the 1914 date.

Mr. Corbett: Of course we maintain they are substantially the same machines, Your Honor.

Mr. Richey: It is a matter of argument. I think that will give Your Honor a notion of the relative dates.

The Court: This Mahoney patent was before the Cleveland Court?

Mr. Richey: Yes.

Mr. Corbett: Not as a reference against Clutter; it was too late for Clutter.

Mr. Richey: We argued both ways.

Mr. Corbett: Under the circumstances it was not urged by the defendant after the introduction of that testimony.

Mr. Richey: I don't know. I think we will have to check that up. We took both grounds: that it did not negative the novelty; and, secondly, that it was too late anyway as far as the Clutter patent was concerned; and we talked about that this morning; and then there was the Wagner patent.

The Court: All right.

(Narrative continued.) On the inquiry of Oliver Brothers dated October 31, 1914, the Mahoney Railroad Ditching Machine Company had a machine manufactured by the Lidgerwood Company of New York with the intention that it be sold to the Oliver Brothers. The photo-

graph just handed me shows the machine we had made at the Lidgerwood factory in New York and is a true representation of that machine. The machine was never sold Oliver Brothers. After I had gone to see them and had this machine made they said that trench digging had to be done by hand on account of exposure to gun fire. The machine was shipped to Vincennes, Indiana, and it was finally sold to Lanahan Contracting Company. I don't think that was all the name. They put a clam shell dipper on this machine and used it at Vincennes for loading gravel in a gravel pit.

Mr. Mahoney: Photograph just identified by the witness as being a photograph of a machine manufactured by the Lidgerwood Co. of New York for the Mahoney Railroad Ditching Machine Co. is hereby offered in evidence as Defendants' Exhibit No. 9 and the notary is requested to mark the same: Photograph of machine built for the Mahoney Railroad Ditching Machine Company by Lidgerwood Co.

(Narrative continued.) I think this machine was sold to Lanahan about 1922. The machine was completed by Lidgerwood in the spring of 1915. Between the year 1915 and the time it was sold to Lanahan the contractor Mr. Watson had it in his barn at Vincennes.

(The hearing before the Notary taking these depositions was adjourned until ten a. m. September 11, 1929.)

(The hearing before the Notary was resumed according to adjournment. The parties present as before.)

(Narrative continued.) The Mr. Watson referred to in my previous testimony was a stockholder of the Railroad Ditching Machine Company. He came in the company in 1913. I think it was in the spring. Mr. Watson is now dead. At the time he came into this company he was in good financial condition. He did not put any money into the company. He bought stock from another party. He did not help me to finance in any way the development of the machine shown in Defendants' Exhibit No. 5. He never gave me any help on this machine. I was an officer of the Mahoney Railroad Ditching Machine Company from the beginning, Vice President and Manager, and hold the same position yet. The machine shown in Defendants' Exhibit No. 9 which was built by the Lidgerwood Co. for the Mahoney Railroad Ditching Machine Company was financed by Mr. Watson and W. L.

Ewing. They sent me to New York after receiving the Oliver letter, and I made arrangements with the Lidgerwood people to build this machine. They gave me expense money to New York, and nothing was paid on the machine until it came to Vincennes. The machine was then paid for by Mr. Watson and Mr. Ewing. Mr. Ewing was a stockholder. He is now living at Vincennes, Indiana. I never had any control over the disposition of the machine shown in Defendants' Exhibit No. 9. Mr. Watson had control of the machine.

Cross Examination by Mr. Siggers.

The machine shown in the first photograph of the catalog Defendants' Exhibit No. 1 was placed on the rear flat car of a string of flats with a cable extending to a hoist on the car next to the locomotive. When the dipper was lowered the dipper was filled by the movement of the train. It was then drawn up the inclined guide rail and dumped behind the machine. It dropped back into the ditch onto the guide rail. The same process was gone over until that portion of the car was filled. The ditcher was then drawn forward by a cable to continue the work. The dipper was hinged to the boom—no, it was attached by bails to the boom and the bails were riveted to the sides of the dipper and pivoted to the boom. That is, the bails were. There was a strap riveted to either side of the boom, making two straps to a bail. There was only one bail. There was no connection between the boom and the guide rail, it rolled over, had a roller under the boom and rolled on the guide rail.

Mr. Corbett: Pardon me a moment. I believe it will facilitate the thing. It will have to be cleared up later. Your Honor realizes that a great deal of this early cross examination relates to that railroad ditcher operating on the side upon which we are not relying. The record may show that. I am not sure.

The Court: All right. I know what you mean.

(Narrative continued.) The lifting cable was attached to the boom at the guide rail. There was no cable or chain or rope of any kind attached to the scoop except a dumping rope attached to the bottom, the dumping bottom. This machine employed a boom which was so mounted as to swing both vertically and horizontally, being guided, however, by a guide rail with which it had contact by means of a roller on its under side. The

guide rail was at right angles to the car on which the machine was mounted. The boom was pivoted on one side of the machine, the other end was attached to the dipper. Referring to the second photograph of the same exhibit the scoop is hung by the bail from the end of the dipper boom. The dipper can swing freely and on the end of the boom except as it was restrained by gravity or the weight of the load it carries. There was a single hoisting cable used for operating the boom and also pulling the machine forward as the loading progressed. The same cable which lifts the load to the top of the guide, then lets the dipper drop back by the operator releasing his line or slacking his line. There was not a cable or rope shown in the left hand foreground of the two pictures, the cable that lifted the load done all that work, drew the machine forward when necessary. There was only one cable employed and that cable served the dual purpose of hoisting the boom and moving the entire machine forward. There was a vertical mast employed at the top of the guide rail. The mast was stationary but the guide rail could be adjusted in or out for different width ditches and in going to sidings to clear trains. The guide rail was stationary after it had been adjusted. The hoist cable at one end was tied to the top of the mast, the other end went down the mast to the base of the machine, straight down the mast to the base of the machine, then extended over the floor of the flat cars to the hoist engine. The hoist engine was just an ordinary double drum hoist engine with a winch on it. Most of them was of the Lidgerwood type. The hoist cable lead to one of the two drums. The other drum was not in use as a general thing. The drums were on different shafts and were operated at different times. The second drum was on most of these machines that we purchased. The hoist engine was a hoist of standard make, a Lidgerwood. The winch was not employed on the machine for any other work. The cable lead to one drum and was wrapped on that drum. The cable was employed for drawing the entire machine along the flat car in this manner. After dumping the load the boom would be pulled up to what we called two blocks, that is pulled up to the mast and that made it rigid there while the cable was doing the pulling. The other end of the cable was dead-ended on the drum.

Q. Now you have said that one end of the cable was attached to the top of the mast and the other end of the cable was attached to the drum, and you have also said

that the same cable was employed for hoisting the boom and swinging the dipper and for moving the entire machine over the flat car. Will you please explain how this was done? A. Why, as I explained before, the boom is pulled up to the post, the mast, and then the machine is pulled by this single cable from the hoist.

Q. But that can be done, Mr. Mahoney, if you have one of the cables attached to the mast and the other end attached to the hoisting drum? A. The one end attached on the hoisting drum wound around the drum. The other end is on the dipper boom and when they engage the drum it pulls the machine forward.

Q. Will you please explain further how the cable moves the entire machine forward? What was the cable pulling against? A. You must understand that this hoisting engine wasn't on the machine, it was up next to the locomotive,—

The Court: Is there very much of that? They do not make any claim for this machine, this box car.

Mr. Edgerton: There is a good deal of this.

The Court: Why not skip it then?

Mr. Richey: As far as I am concerned, we may skip that.

The Court: They do not make any claim for it.

Mr. Edgerton: We will find the part where they take up the next.

The Court: See if you can find it.

(Conference between counsel.)

Mr. Edgerton: I think we are agreed.

Mr. Mahoney: We are not relying on Defendants' Exhibit 2, only to show this man had the development in mind and was proceeding along that line; and are relying on Plaintiff's Exhibit 2 just to show that he was in the business and trying to get a proper ditcher.

The Court: You agree Defendants' Exhibit No. 2 would not negative it?

Mr. Mahoney: We never made any claim for that, only to show the history and development of the Mahoney later machine.

(Narrative continued.) Referring to Defendants' Exhibit No. 2 I did not take out a patent on that machine. I never applied for a patent on that machine.

Q. Then the notice consisting of the word "Patented" which appears below each photograph in Ex-

hibit No. 2 is incorrect, is it? A. Are they in here? Yes, they were not patented.

Q. Did you authorize the issue of the circular of the Mahoney Railroad Ditching Machine Company which is alleged to be reproduced in Defendants' Exhibit No. 2? A. I did.

Q. What was your purpose in advertising the machine as patented when you had not even applied for a patent? A. Well, this was on the principle of the railway ditching machine which we had patented.

Q. Then you think that the two machines, that is the machine of Exhibit 2 and the machine of the first three photographs of Exhibit 1 are identical in principle, do you? A. The principle is about the same, loaded on one side of the carriage, and dumped behind it.

(Narrative continued.) We only made one machine of the type shown in Exhibit 2. After a test I concluded that it was a failure. It didn't work well. It didn't do the very best kind of work and I concluded it wouldn't be a success. The filling of the dipper by cable connection from the boom on the front end gave most of the trouble. It didn't do well. It wouldn't tip over. It seemed not to have power enough to fill and that it was hard to draw forward. We filled the dipper by the boom and dipper being pulled forward from a beam at the front end. The beam appears in the left hand photograph of Exhibit 2. I have marked it with the letter "A" on the photograph.

The Court: Which photograph is that now?

Mr. Edgerton: Exhibit No. 2, Your Honor.

The Court: You are not claiming anything for that. Go ahead.

(Narrative continued.) There was a cable which was wound around the drum driven by a gasoline engine and which was guided to the dipper or scoop by means of sheaves or pulleys. The beam "A" carried several guiding sheaves for the cable, possibly three. The cable was attached at one end of the dipper and extended to the sheaves on the beam "A" and back again to the drum on the end. Looking at the machine in the left hand photograph of Exhibit 2 the beam "A" was located at the far end of the machine and the dipper is at the near end of the machine ready to begin excavating. The dipper was mounted to the boom from beam "A", connected with the boom from beam "A". The dipper was on the

end of a short beam which was pivoted to the outer end of beam "A". The dipper beam, I couldn't just say now what the length was, but twelve or fourteen feet. From testing this machine I found that the machine would cut a ditch six feet deep and transfer tile to a depth of seven feet. The dipper stick I don't see it in the photograph. It isn't in the trench, it's behind the men I think. I have marked the dipper stick or dipper beam with the letter "B" on the left hand photograph. I can't find it on the right hand photograph. I marked the left hand photograph with the letter "S" to identify the dipper. The dipper was pivoted to the dipper stick. The purpose of the upright frame and the downward slanting I-beam on the machine was that when the dipper was filled it was pulled up to the slanting I-beam and continued on up by the pulley or traveller sufficient distance to dump behind the machine. The slanting I-beam was movable at the horizontal and was pulled with the filling of the dipper and when the load was raised why the beam came backwards sufficient to dump behind the machine. There were rollers provided for the slanting I-beams so that it traveled freely along the horizontal beam. The slanting beam moved back and forth as the dipper moved back and forth lengthwise of the machine. There was a chain or cable attached to the dipper and extending up to the slanting beam and along underneath the slanting beam to the top of the frame and thence downwardly to the engine. The cable referred to was employed for hoisting the dipper when loaded. The dipper traveled upwardly along the slanting beam when loaded. I abandoned the manufacture of the machine of the type shown in Exhibit 2 after experimenting with it. I didn't think it would do the work satisfactorily so I abandoned it. My recollection is that it was abandoned in 1911. I have not the original leaflet or advertisement of which Defendants' Exhibit 2 is a reproduction. I may have some at home in North Bend.

Q. Did you give the original leaflet to Mr. J. J. Mahoney?

Mr. Mahoney: Objected to as immaterial and irrelevant.

A. I am not right sure where it was. I suppose I did.

Q. When did you do this? A. Been some time now, I expect about four months.

Mr. Siggers: Counsel for plaintiff hereby gives notice of their intention to apply for an order from the court for the production of the original booklet from which Defendants' Exhibit No. 2 is reproduced, inasmuch as Exhibit No. 2 is not the best evidence.

Mr. Mahoney: It appears from the record that there was never any claim that the circular offered was the original and the photograph was properly identified by the witness as being a true and accurate representation of the machine to which it relates and is therefore properly best evidence under the rules of evidence.

Mr. Siggers: It is elementary that when an original exists a reproduction is not the best evidence.

Q. Referring to Exhibit No. 4 will you please describe how this machine is operated? A. Is operated by a dipper, dipper stick and boom and mast.

The Court: Is that still Exhibit 2? They do not claim anything for Exhibit 2?

Mr. Richey: It is kind of mixed up.

The Court: Of course if it is mixed up you have to read it.

Mr. Mahoney: It is not mixed up.

The Court: See if you can find where he refers to something else.

Mr. Richey: I meant to say, in cross examination you dodge back and forth.

The Court: Sometimes you do; sometimes a logical cross examiner, like this man, would not do that.

Mr. Richey: We shall do the best we can to separate the chaff from the wheat.

Q. Referring to Exhibit No. 4—I think I have the place, Your Honor.

The Court: All right.

(Narrative continued.) Referring to Exhibit 4 this machine is operated by a dipper, dipper stick and boom and mast. In operating, the ropes or cables used were a cable for dumping the dipper, that's one. And there is one for filling the dipper, is two. And there is one for hoisting the boom, is three. And one for swinging the boom, is four. There were two cables for swinging the boom sidewise in opposite directions, on two small drums. When one of these drums is moved by power the cable which wound on that drum swung the two booms in one direction and when the other small drum was rotated by power the booms were swung in the opposite direction. In addition to the lines which I have enumerated

there was a dump line, attached to the back end of the dipper. The scoop was pivoted on the lower end of a dipper stick by means of a bail. The scoop was free to oscillate or swing on the bail.

To identify the line which was used for dumping the scoop I have marked it with the letter "K" on Exhibit 4. In order to dump the spoil the lower end of that line is attached to the scoop—now sometimes we use a small sheave in there. In this case I think we had a small sheave and a line went up and was made fast to the boom. To mark the spot on the boom where the dumping line was made fast I have marked the photograph Defendants' Exhibit 4 with the letter "X". There was a winch employed for winding the rope "K" which dumps the scoop. I will identify this winch in Exhibit 4 by marking it with the letter "W". The winch was driven by the engine, and was slacked by the operator when not in use, and when he wanted it dumped he pulled on the line about three turns on the winch. The winch "W" rotated continuously with one of the drums and when the operator desired to invert the scoop to dump the spoil he pulled on the loose end of the rope "K", several turns of which were made about the winch "W". The rope "K" was used for throwing the dipper back for filling purposes. That is, the rope "K" moved the dipper out of position to start an excavating stroke. The scoop swung on the bail of the dump.

Q. What was the purpose of the line shown extending from the mast in the direction of the dipper and below the boom, referring to Exhibit No. 4?

Mr. Mahoney: Objected to as being indefinite.

Q. I will amend the question by adding that I am referring to the line which crosses the face of the left hand traction wheel at about its midheight, as Exhibit 4 is viewed. A. I can't just recall where that line goes at this time.

(Record shows that the taking of the deposition was adjourned at this time.)

(September 12, 1929, taking of the deposition pursuant to adjournment. Same parties present.)

(Narrative continued.) I had charge of the advertising of the Mahoney Railroad Ditching Machine Company while I was connected with it. I prepared the advertising copy. We did not advertise in trade magazines or publications. Our advertising was done by means of

leaflets and catalogs. I don't recall the name now of our printer; he's a Vincennes printer. He was an old man at that time, I don't know but that the firm is still there in existence. I have got his name now, Crotts Printing Company. I dealt with Mr. Crotts. Referring to Exhibit 4 the line "K" only assisted in throwing the scoop outwardly, when empty it assisted in backing the scoop up.

The parts or falls of the hoisting line I have identified on Exhibit 4 by the letter "H". Referring to the pulley "A" previously identified the hoist line "H" is passed around that pulley. One end of the hoist line "H" is dead-ended or fastened to a movable boom near the outer end. I have marked the point where the hoist line "H" is dead-ended to the boom on the photograph by the letter "Y" The sheave "A" was between two straps, iron straps connected to the dipper stick. These straps extended above the boom. I am referring now to the straps which connected the sheave "A" to the dipper stick. I have identified the boom on Exhibit 4 by means of the letter "B", and the dipper stick or ditcher stick by means of the letter "S". The pivot axis of the ditcher stick "S" is indistinct. I can't see it. I can't find it. The dipper stick did not extend above the pivot axis or above the boom except the straps attached to it. I have identified the straps which were attached to the dipper stick by the letter "Z" on Exhibit 4.

I marked the straps on which the sheave "A" is mounted. I can see the straps which extend from the upper end of the dipper stick "S". These straps were secured by a pivot bolt to the boom. I am marking the straps which connect the dipper stick "S" to the boom "B" on Exhibit 4 with the letter "R". I think the straps "Z" on which the sheave "A" was mounted were connected to the straps "R". I can't see it yet, I am uncertain.

With reference to the line "K" assisting in throwing the scoop outwardly, when the scoop is lifted it was in a vertical position with sheave "A" and boom, and when the dipper is used farther back it was drawn by line "K". When I say farther back I mean farther back to commence digging the trench. There was no other line. It was hung from the boom above and dropped down vertically when lifted out of the trench; when placed in position to refill the line "K" pulled the

dipper farther back. You are correct in summarizing my answers to preceding questions by stating that the scoop or dipper moved out to a plumb position solely under the action of gravity and that it was moved out beyond a plumb position solely by power imparted by the line "K" by means of a winch "W" and the operator standing at that point.

Q. You have testified that the line "K" dumped the scoop or dipper and you have also testified that the line "K" was employed to move the scoop out beyond the plumb position? Or you have further stated that the scoop was free to swing on the lower end of the ditcher stick. Now if the line "K" pulls the scoop upwardly and is on its pivotal axis, the scoop would be in dumping position when it had been moved out beyond plumb. In other words if the line "K" pulled the scoop outwardly wouldn't it hold the scoop in dumping position? A. It would providing there was no means of holding it down.

Q. Was there any means for holding the scoop down, as you have expressed it; and if so, describe that means? A. There was a strut in the dipper stick to the top rear end of the dipper, which held the dipper down until released from that strut.

Q. Will you identify the strut on Exhibit No. 4, employing the letter "T"?

(Witness marks photograph.)

Q. Was the upper end of the strut "T" rigidly secured to the dipper stick "S"? Or was it pivoted? A. It was pivoted.

Q. Does the pivotal part appear in Exhibit No. 4? A. It does.

Q. How was the lower end of the strut "T" secured to the dipper or scoop? A. It dropped over in position without being held by any thing.

Q. Then the strut "T" did not prevent the swinging of the scoop in a counter clockwise direction as the scoop is viewed in Exhibit No. 4, to put the matter differently, the strut "T" did not prevent the open end of the scoop from swinging upwardly freely on the scoop pivots? A. The filling cable covers that. The strut ditcher didn't cause anything of that kind. The filling cable attached to the bail would govern the dipper from turning over, upwardly.

(Narrative continued.) The strut "T" would allow the dipper to swing away from the lower end of the strut

after the dipper was lifted by the boom. The rope "K" held the back of the scoop up against the lower end of the strut "T". The strut "T" was a freely hanging member but there was some appliances on there that I don't just get now that carried it to a certain position to engage the dipper. The action of gravity was depended upon to effect the engagement of the lower end of the strut "T" with the dipper at certain times during the operation of the machine. There was a small piece of angle iron in a semi-circle to receive the lower end of the strut "T". This piece of angle iron was on the scoop. This piece of angle iron provided a shoulder. When the boom was raised the strut was released below at the angle iron. It was the lifting of the boom which raised the front end of the dipper, permitting the strut to release. As far as I now know there was no element for kicking or pushing the strut "T" off the angle iron except as I stated.

Q. I call your attention to a rope or cable which leads from the machine downwardly and thence across the face of the left hand traction wheel of the machine of Exhibit No. 4 as viewed in the photograph, and thence apparently to a member passing through the dipper stick "S" and apparently engaging the strut "T" and will ask you to explain the function of the rope and member. A. Why, I think that line was used by the operator to pull the strut back over dipper when being loaded, before being filled.

Q. After the strut "T" had been placed in engagement with the shoulder on the scoop how was the scoop inverted to dump its load? A. The lifting of the scoop released that strut and it dropped on the back side of the dipper. The line "K" was then drawn for tipping the dipper.

Q. How could the lifting of the scoop release the strut? A. When the front end was lifted by the bail and boom the dipper came up on the front end and that released the strut.

Q. Did the line "K" move the scoop out beyond plumb for dumping? A. No, only when empty, moved it back for filling.

(Narrative continued.) Sometimes the scoop would be pulled beyond plumb by the line "K". The line "K" didn't exert any force until it was sufficiently high and the boom turned around far enough to dump. Then the

operator pulled on the line "K", well, I guess that would be right, it was on the winch, sometimes the material was sticky and in pulling we would get the dipper out beyond the vertical position or the plumb position. In dumping line "L" had a tendency to pull it back of plumb position. When you started to dump beyond the plumb position the line "K" would immediately dump the contents of the scoop. We would never dump beyond plumb position except when the material was pretty stiff and sticky, the dipper would be pulled until it was turned over on its nose or mouth whichever you call it. The usual operation except when working in very unreliable or sticky material was to dump the scoop held approximately in plumb position. The strut "T" played no part in dumping the scoop. The machine of Exhibit No. 4 employed a vertical mast and a fixed inclined boom. The mast of the machine on Exhibit No. 4 I am marking on that exhibit with the letter "M" and similarly marking the fixed boom with the letter "F". The fixed boom "F" was always maintained at an angle of about sixty degrees, I judge that would be about it. The line which the operator pulls in order to engage the strut "T" with the angle piece on the scoop I am marking on Exhibit 4 with the letter "L". When you start an excavation with the machine of Exhibit No. 4 the bottom of the scoop always engaged with the ground. The weight of the boom pressed the scoop bottom against the bottom of the ditch if desired. Otherwise the operator could hold the boom in position just as it hit the ground. The operator had a friction drum. The operator held the boom in position by holding his drum, releasing the drum and holding it by brake that is, the hoisting drum. The weight of the boom was taken off the scoop whenever it was desired to keep the scoop from lying flat on the bottom of the ditch, as when seeking to make it penetrate more deeply. The operators on this machine were three. One of them was the runner or engineer operating the booms, swings; and the other, handline man operated the lines for dumping and adjusting the dipper struts; the other one was the fireman. The engineer controlled the hoist line "H" and the hauling line which pulled the scoop toward the machine and also the two drums controlling the two lines for the sidewise swinging. The hand rope man had charge of the ropes "K" and "L". His position was near the winch "W" so that he could tighten the rope "K" upon the revolving winch whenever that was neces-

sary. Exhibit 4 shows the traction engine that was used with this machine in our first test. I did not dig in rocky ground with any of our land ditching machines. Gumbo ground was the hardest that we ever dug in. Very tough material. At the time this photograph which is reproduced in Exhibit 4 was taken we were not digging in gumbo, it was very loose dirt, loose sandy soil. The location of the tests which is illustrated in Exhibit No. 4 as near as I can tell was about a mile and a half south of Vincennes, Indiana. At this first test south of Vincennes about a hundred feet of trench was dug. We did not continue with this ditch becaust we had a leaky traction, couldn't keep up steam, water in it and had to be pulled back to Vincennes. I don't recall at this time for whom this ditching was done. We never went back to complete the ditch.

The Court: What year did he say that was?

Mr. Mahoney: The summer of 1913.

Mr. Edgerton: Yes, this is 1913.

(Narrative continued.) We were never paid for this work. It was a test run on a farm. The location of this farm was south of Vincennes, close to the Wabash River. I requested the privilege of testing this machine from the owner of the farm. I never paid him anything for the use of his land. The ditch was laid out and staked for a drainage ditch. I couldn't say whether the ditch was ever used. We never filled up the ditch. I left the ditch open, what I done of it.

Q. The digging of that 100 foot ditch was merely an experiment with the machine, was it not?

Mr. Mahoney: I object to the word "experiment".

A. It was.

Q. Will you please put in the record a statement of the way in which that farm can be reached proceeding south from Vincennes, Indiana. A. It's south of Vincennes, I would think about a mile and a half, as near as I can judge it is about half a mile from the Wabash River.

Q. In what direction relative to the river? A. South.

Q. Did you have to cross the river over a bridge or ferry before reaching this farm? A. No, sir, it was on the Indiana side, I think it's called the River Road.

Q. Did the farm extend all the way to the river bank? A. Couldn't say exactly. I went in a lane from the River Road.

(Narrative continued.) I am not able to describe more definitely the way in which the farm can be reached than to say that it is a mile and a half down the River Road in Vincennes, then turn in a lane to where the work was done. I did know the name of those people but I never went back, and have forgotten it. The land which you turn into led off from the left of the road. I didn't get hold of a new traction engine or have the first traction engine repaired, because I stayed at the stop at Vincennes putting a boiler on a machine and didn't go back. It was some time before I got the boiler. My recollection is that it was a couple of months. I purchased the boiler at Dayton, Ohio, the name of the firm I can't recall just now. It was a new boiler. I can't say how long it took to install the boiler on the machine. We done some other work on railroad business. The machine was in the shop for several months. We were doing work on other ditchers and I didn't expect to go back there any more. So we didn't rush the work of putting the boiler on, installing the boiler. From the time this first traction engine was used with the machine on the farm a mile and a half south of Vincennes, Indiana, until the time when I reconstructed the machine in condition for use in the field I would say it was about six or seven months. It might have been as long as nine or ten months. At that time we had in our shop about four men. I couldn't say how long they were engaged on the work of the railroad ditchers. Our shop was closed for a while, because of lack of funds. As near as I can think it was about six weeks. It was closed off and on in winter and in the fall of the year, principally winter. Looking at photograph Exhibit No. 4 I think the time that photograph was taken was July, maybe August. July at any rate. You have called my attention to the man standing adjacent the corn in the cornfield which appears in Exhibit No. 4 and you state that you are particularly calling my attention to the fact that the corn is several feet over that man's head and ask me whether it was July, August or September when that picture was taken. I will say that it was not as late as September. It must have been in August. It was in the year 1913. I know it was in the summer time, the weather was very hot, and I would say, looking at the picture I would say it was in August. Corn gets very tall out in that country, it has a rich soil. I don't think it was as late as September. I haven't anything except my recollection

at this time as to when the picture of Exhibit No. 4 was taken, nothing only my recollection, the hot weather and the high corn. It was in the summer. I know it wasn't as late as September.

In 1913 and 1914 the men in our shop were paid by cash. We drew a check for the payroll money every week, weekly, except when we were closed down. I have not under my possession or under my control at this time any books of the Mahoney Railroad Ditching Machine Company. Mr. Watson got some of them, and someone stole the others in addition to my blue prints. Mr. Watson got possession of some of the records of the company in 1914. This was the Mr. Watson who was a stockholder of the company. He subsequently died. His death occurred between three and four years ago. I think he retained some of the records of the company up until the time of his death. I haven't seen any of the records while they were in Mr. Watson's possession. My relations with Mr. Watson were always cordial so far as I know. I talked to him about the matter and asked him what could be done to revive it. As to why the records were turned over to Mr. Watson I couldn't say just why. I was away from there. He wanted to take care of the records, I guess. He took them.

Q. Did you move away from Vincennes about that time?

Mr. Mahoney: Objected to as being indefinite.

Mr. Siggers: I am referring of course to the period when Mr. Watson obtained some of the records or books of the Mahoney Railroad Ditcher Machine Company.

Mr. Mahoney: The question still remains indefinite.

A. No, I didn't.

Q. Did your company go out of business so far as selling and manufacturing was concerned about the time that Mr. Watson obtained possession of some of the company's records? A. The company really never went out of existence, but couldn't operate without means.

Q. Wasn't the last land ditcher made by your company completed in 1914?

Mr. Mahoney: The question is objected to as being indefinite as it does not specify what is meant by land ditcher, as this company was in the business of manufacturing several types of ditchers.

Q. I will amend the previous question by adding that the term land ditcher is used in precisely the same sense

that it was used in Defendants' Exhibit No. 1, the catalog, and in the direct examination of this witness.

Mr. Mahoney: As amended the question is still objected to, as the catalog and direct examination of this witness specified the various types of land ditchers to which the witness' testimony referred.

A. The land ditcher was completed in '13, and put on the sewer work in Vincennes in '14.

Q. That wasn't the same machine, was it? That is to say, the machine which you have testified was employed in 1914 at Vincennes is not the same machine as the one which you have testified was tested out on the farm one and a half miles south of Vincennes, Indiana, about August of 1913? A. It's the same machine excepting it had a boiler, and some small changes made.

Q. Will you describe what changes were made in the machine tested out on the farm south of Vincennes before the sewer work was done in Vincennes in 1914? A. Why, not much of any, some alignment of the sheaves to work or direct. Well, that's about all that I can remember.

Q. Refresh your recollection by referring to Exhibits Nos. 4 and 5 and state whether or not the machine of Exhibit No. 5 was substantially a reconstruction of the machine of Exhibit No. 4? A. Why, it was substantially as far as I can see.

Q. Then there were quite a number of changes made in the machine of Exhibit No. 4 in order to get the machine of Exhibit No. 5, is that correct?

Mr. Reed: The question is objected to as misleading and not based on the witness' answers.

Mr. Siggers: The witness' answer to cross interrogatory 463 was that the machine of Exhibit No. 5 was substantially a reconstruction of the machine of Exhibit No. 4.

Mr. Mahoney: The witness' answer stands for itself.

A. There was some changes.

(Narrative continued.) Besides the alignment of the sheave and placing the boiler on the machine there were no changes as far as I can see except dispensing with the struts. The hoist line of Exhibit 4 as compared to the hoist line of Exhibit 5 are so far as I can see practically the same. The end part of the hoist line in the machine of Exhibit 4 is dead-ended directly upon the

boom. In the machine of Exhibit 5 the end part of the hoist line extends over a boom extension to a point near the lower end of the stick where it is attached or dead-ended. In the machine of Exhibit 4 the sheave "A" is connected by straps or links "Z" to the straps at the upper end of the ditcher stick. The corresponding sheave of Exhibit 5 is mounted directly upon the upper end of the dipper stick. It went around a sheave at the upper end of the dipper stick. That is there was a cable passing around the sheave mounted directly on the upper end of the dipper stick and not connected to the dipper stick by links as in the machine of Exhibit No. 4. There was no hand line in the machine of Exhibit No. 5 corresponding to the strut operating line "L" designated in Exhibit No. 4. Referring to Exhibit No. 5 I will mark the line or cable which was employed to invert the scoop for dumping by the letter "P". The line "P" in Exhibit 5 was fastened or dead-ended to the outer end of the boom. The line "P" could be used to assist in moving the ditcher stick outwardly and it could be used for inverting the scoop to discharge the spoil. The line "P" extended from the outer end of the boom down to the scoop and around a sheave, which, as seen in Exhibit 5, was mounted on the back of the scoop and thence upwardly to a sheave on the boom located near the point where the ditcher stick is pivoted to the boom and around a sheave and back to the machine where it was wound upon a link or drum driven by the engine. I will mark the sheave adjacent the ditcher stick pivot around which the line "P" passes with the letter "N". I will mark the point where the line "P" is made fast to the end of the boom with the letter "O". I will mark on Exhibit 5 the point where the hoist line is dead-ended to the ditcher stick by the letter "R". I will mark the sheave at the outer end of the boom which the hoist line passes around on Exhibit 5 with the letter "S". I will mark the sheave on the fixed boom by which the hoist line is passed by the letter "T" on Exhibit 5. I will mark all the parts of the hoist line which appear in the space between the fixed boom and the movable boom of the machine of Exhibit 5 with the letter "V". I will also use the same letter to designate that part of the hoist line which extends down to the connection "R" of the ditcher stick. I will mark all parts of the hauling line which appear in Exhibit No. 5 with the letter "L". One end of the line "L" is dead-ended to the boom. The

point where the line "L" was dead-ended to the boom I will mark with the letter "M". The scoop of the machine of Exhibit 5 was freely swingable on the bail by which it is attached to the scoop stick except as the filling bail held it in position. I mean the hauling line bail. I have marked the hauling line bail in the machine of Exhibit 5 with the letter "H". I think the traction wheels of the two machines of Exhibits 4 and 5 are the same. As to the mast of Exhibit 5 compared with the mast of Exhibit 4, it is the same mast, except that wood carried the sheave and wood is hinged to the mast. That permits the lines to bend at that point and following the boom to a swinging position. I made this change in the construction of the mast because continuous swinging of the boom broke the cables at that point, broke them off. I am referring of course with my experience to the machine shown in Exhibit No. 4. As to the link or stay connecting the upper end of the mast with the fixed boom in the machine of Exhibit No. 4, when the machine of Exhibit No. 5 was prepared for use in the field, I think there was a change made there, possibly to pull it closer to the mast. Comparing Exhibits Nos. 4 and 5 the two stays are different. My recollection is that this change was made by putting in a longer stay to permit that boom to lean forward. As far as the canopy over the engine is concerned, the men might have put a cover of tin over them but I didn't build a canopy. Referring to the machine of Exhibit No. 5 beside the steam boiler which was mounted on the frame, the frame carried drums, hoist engine and winch. The drums and winch were driven by a double cylinder engine. The engine which was mounted on the machine of Exhibit No. 5 was employed to drive five drums if you call the winch as one of the drums. I would hardly call that a drum because it only runs with the engines. The drums were driven by friction and were held and released in the engine with a brake. In that way it was independent. By friction I mean friction clutches. The machine of Exhibit 4 had a separate traction engine, which could travel over the road like any ordinary threshing machine of the present day. Each of the lines "V", "P", and "L" of the machine of Exhibit 5 was wrapped around one of these engine driven drums. There were two lines wrapped around two drums for swinging the booms on opposite sides of the machine for dumping the spoil. There was no latch to keep the scoop from swinging on the bail, that

is turning over. Referring to Exhibit No. 5 the open mouth of the scoop is pointing upwardly. As to the purpose of the members shown at the back of the scoop, and apparently made fast to one side of the scoop which is in the foreground of photograph Exhibit No. 5 I don't know what that is on there for. There was no such member on the scoop of Exhibit No. 4, not that I now know of. When it was desired to swing the dipper stick of Exhibit No. 5 out of plumb position the line "P" was used. It was also used for inverting the scoop to discharge its spoil. In that case the filling line had the dipper load and scoop while this was turning over, while the dumping line was tipping the load.

The Court: That machine did not have any drop bottom on it?

Mr. Siggers: No, Your Honor.

The Court: All right. Go ahead.

(Narrative continued.) The hoisting line "V" pulled the dipper stick out beyond the plumb position to some extent. The line "P" assisted the line "V" as in the previous machine, that is the machine of Exhibit No. 4. We never dug any rocky soil with the machine of Exhibit No. 5. There were four teeth on the front end of the dipper of the machine of Exhibit No. 5.

Q. If one or more of these teeth was engaged under an obstruction and considerable power was applied to the hauling line "L" what would happen?

Mr. Reed: The question is objected to as calling for an opinion. The witness has stated that he never operated the machine in rocky soil and any answer to the question must necessarily be theory.

A. Why it would tear something loose, something down if the operator did not check it in time to prevent it, it would certainly tear something loose.

The Court: Is that common with this machine?

Mr. Reed: No, Your Honor. That is common with any machine; if you put enough power upon it, it will pull anything loose.

(Narrative continued.) The hauling bail "H" or filling bail was connected to the front of the scoop at a point or points above the teeth which I have mentioned. The scoop would not cant or turn over when a deep bite was taken because the bail connection on the scoop was so far in front that the back part of the dipper always

remained down, and it wouldn't turn over because the filling bail was too low down and too far in front, and it is attached to the cutter teeth on the side. If a root of a tree was engaged by the teeth of the scoop of the machine in Exhibit 5, while both the hoisting line and the hauling line were power actuated I think the scoop would be torn loose from the pulling bail. If a root of a tree were engaged you couldn't continue to excavate without grubbing and chopping the base of the tree and the root out of the way. Referring to Exhibits Nos. 5 and 6 the two men with picks were not grubbing and digging out tree roots. This ditch is being made now for the street. There were no tree roots in the way. It may have been that the men shown were picking around a water line. They had a good deal of that to do to keep from cutting the pipes. You have asked why the ditch shown in Exhibit No. 6 is apparently so shallow that it will not receive the five foot storm sewer pipe sections appearing at the right side of the photograph of Exhibit No. 6. I think the machine is just starting at the point where the heavy pipe or large pipe is to be put in on this street. As to the machine of Exhibit 6 digging the entire ditch, the machine dug down to a depth of eight or nine feet, and there was very little sewer work cut below that at any point in town on this particular job. There might have been six or eight blocks of this sewer commenced by hand labor before the machine started to work. I couldn't say whether the machine dug the ground shown in the foreground of Exhibit No. 6 and extending from the foreground up to the machine. As to whether the machine had dug that point in the foreground of Exhibit No. 5, I don't—yes, we must have dug that street all the way through except at the car lines and the railroads.

It is hereby stipulated by Counsel for the several parties that the depositions to be taken at Vincennes, Indiana, in accordance with the notices heretofore served, on Counsel for Plaintiff, shall be postponed from Friday, September 13th, 1929, at two o'clock, to Monday, September 16th, 1929, at two P. M., without further notice, and the time within which defendants may complete their depositions is extended for three days from the present limit.

(The deposition session was adjourned until ten A. M. September 13, 1929.)

(The taking of the deposition was resumed pursuant to adjournment, on September 13, 1929.)

(Narrative continued.) Comparing the booms of Exhibits Nos. 4 and 5, the booms are the same except in length at the top. Exhibit No. 5 shows the boom extended, and the straps to the end of the boom on Exhibit No. 4 were discarded. I am referring to the straps which supported the sheave for the line "K" on Exhibit 4. The booms of Exhibits 4 and 5 are pivoted at the base about the same place. The base connection of the boom in the machine of Exhibit No. 5 has been altered some as compared with the machine of Exhibit No. 4. The two dipper sticks were changed in addition to leaving off the strut "T" of Exhibit No. 4. Referring to the boom in Exhibit No. 4 I think there was two truss rods extending longitudinally with the boom for bracing the same. I have marked Exhibit No. 4 with the letter "D" to designate the two truss rods which extended underneath the boom "B". There were no truss rods on the boom of Exhibit No. 5. I did make the entire boom stronger. The dipper stick of Exhibit No. 5 does not differ much from the dipper stick of machine No. 4. It is a heavier stick. A new timber was used to replace the old dipper stick. The proportion of the dipper of Exhibit 5 is about the same as the scoop of Exhibit No. 4. I think the dipper was reconstructed. The function of the member shown at the back of the scoop that is the face of the scoop which is presented towards the observer as the machine of Exhibit 4 is viewed the member referred to is that which apparently straddles the back of the scoop and which is apparently made out of round rod and which seems to be connected with the lower part of the line "K" is the rod where the line "K" was hooked on to the dipper or pulley wheel, that line "K" runs through at that point. That member served as a yoke or bail for the line "K". I will identify this yoke by reference letter "J" on Exhibit 4.

Q. Referring to the last photograph in Exhibit No. 1, you have testified that the machine of that photograph is the same machine as the machine illustrated in Exhibit No. 4. Please mark on the photograph of Exhibit No. 1 which I have referred to indicating the location of the strut "T" using the same letter "T"?

(Witness marks photograph.)

Q. Please also mark the stick "S", the boom "B", the line "K" and the fixed boom "F" in the same page of Exhibit No. 1.

(Witness marks photograph.)

Q. Please explain the operation of the machine of Exhibit No. 5 by explaining how the three lines were pulled and slacked off to cause the scoop to excavate? A. The operator pulled them when necessary for certain movements.

Q. Pardon me, Mr. Mahoney, you haven't answered my question. A. The pulling line was wound on the drum and when the dipper was full the hoisting line would lift the dipper and when swung to the side for dumping the line "P" was drawn by the operator on the winch to tip the dipper.

Q. In order to get the scoop in position for digging, was the hauling line or filling line "L" slacked off? A. It was slacked off and the operator would pull on line "P", the dumping line, pulled it according to what was necessary to put the nose of the dipper in the ground.

Q. At the same time that the rope "P" had power imparted to it through the winch to turn the scoop to the proper angle it was necessary for the other operator to lower the boom and the scoop by releasing the hoist line "V", was it not? A. Not in all cases, he could do whatever was necessary in that.

Q. Starting with the machine in the position shown in Exhibit No. 5, after swinging the scoop sidewise until it was directly over the trench, it was necessary to lower the scoop into the trench by slacking off on the hoist line "V", and if necessary by slacking off the hauling line "L", was it not? A. It was.

Q. When the scoop had descended in the trench until it was about in contact with the bottom of the trench, it was necessary to adjust the scoop by power imparted by line "P" so as to cause the nose of the scoop to take the proper position with respect to the dirt to be excavated, was it not? A. It was.

Q. If the line "P" pulled the back end of the dipper up it was necessary to slack off on the line so as to get the dipper in proper position, was it not? A. It was, and also probably slack line "V".

Q. Did the line "P" during the operation of the machine of Exhibit No. 5 regulate the depth of the cut made by the scoop in each stroke? A. In some instances it did, where the cut wasn't deep enough why the dipper would drop down to a filling position and was drawn by the filling line. The line "P" would

sometimes be slacked in that case, all owing to the way it was pulled in the material.

Q. Referring to the machine of Exhibit No. 5, you could not strike a gravity blow with the teeth of the scoop, could you? A. The dipper would—you would strike gravity blow by tipping rear end up and dropping the hoist line. In that case the teeth would cut into the ground. That's all a matter of knowledge of the operator.

Q. When the line "P" in the machine of Exhibit No. 5 was operated so as to cant the scoop over with the teeth pointing downwardly to the ground, the scoop held up the stick, did it not? A. No, the stick and scoop went down together in the ditch. It was all a matter of holding certain line on the winch.

Q. In order to strike a gravity blow, was it not necessary to release the line "P" and also the hoist line "V" with the hauling line "L" slacked? A. It was necessary to release "P" and hoist line "V", but that was governed entirely by the operator, entirely so.

Q. When the line "V" was slacked off, the boom and stick would descend, would they not? A. They would.

Q. If the line "P" was slacked off, the scoop would immediately cant or turn with its nose pointing upwardly as shown in Exhibit No. 5, would it not? A. Yes. It would providing the operator would permit it. He's in control of that part of it, and dipper can be carried into the ditch in a horizontal position by his handling of that line.

Q. Was not the scoop so balanced on the bail that when hanging freely its nose would point upwardly as clearly illustrated in Exhibit No. 5? A. It would.

Q. So that unless there was tension on the line "P" the scoop would remain in about in the position of Exhibit No. 5? A. That's right.

Q. Now in striking a gravity blow to deliver an effective blow from the teeth, it is necessary, is it not, for the teeth to be presented downwardly in the direction of of the material which is to be dislodged? A. If the gravity blow is to be directed downward why line "P" will have to be tightened by the operator to such an extent that the dipper and boom will go down together in the trench.

Q. You have testified previously that the line "P", when tightened, will cant the scoop so that the back turns

upwardly and that the line "P" assists the line "V" moving the stick outwardly or away from the machine. Is that not a correct statement of your previous testimony?

Mr. Mahoney: Form of question objected to as there is no reference to any particular part of the previous testimony.

A. It is.

Q. If the line "P" aids in moving the stick outwardly or away from the machine and if that same line must be tightened by means of the winch in order to hold the scoop in such a position that its teeth are directed downwardly, how is it possible to strike an effective gravity blow, that is with the scoop and stick falling to a distance of several feet, with the teeth directed downwardly at the moment of impact with the material being excavated? A. The line "P" holds the rear end of the dipper up to such an extent that when the stroke is made the dipper hits on the rear end and drops forward on its teeth for cutting.

Q. You have not explained how, if the line "P" pulls the stick outwardly against the action of gravity when tightened, it is possible to strike a gravity blow with the line "P" actuated by power? A. I tried to explain that in the other question. The rear end of the dipper is held up by "P" hoist lines "V" is lowered, they both go down together in the ditch until the back end hits the bottom of the ditch, then the front end tips over and comes in contact with the bottom of the ditch.

Q. After the back end of the dipper hits the bottom of the ditch the toothed end of the dipper would strike the bottom of the ditch with the flat under portions of the teeth, would it not? A. It would.

Q. So that the gravity blow struck by the machine was not the sort of a blow delivered with the weight of the stick and the weight of the scoop back of the points of the teeth, the points of the teeth vertically downward?

Mr. Mahoney: Objected to on the ground that the question is not very clear.

A. The weight of the boom and the weight of the dipper and tightening of filling line to a position for that blow and the operator holding line "P" to hold the dipper in a horizontal position, it will drop down into a gravity blow.

Q. You have not answered my question cross interrogatory 599—I asked you whether in your machine the points of the teeth were vertically downward at the time the blow was delivered. A. Not entirely so. To some extent for the purpose of taking hold of the material, the ditch material.

Q. In your answer to cross interrogatory 596 and also in your answer to cross interrogatory 597, you stated that the back end of the scoop or dipper hits the bottom of the trench, first, and then drops forward on its teeth for cutting. At the moment when the dipper hits on its rear end, the teeth are necessarily pointing somewhat upwardly, are they not, or at least they are extending horizontally and not vertically downwardly? A. They are not vertically downward at no time. They are horizontal or sloping downward for the purpose of engaging the material in the ditch.

Q. Am I correct in stating that the only blow struck was in the nature of a forward lurch of the dipper after the back end had hit the bottom of the ditch?

Mr. Mahoney: This question is objected to on the ground that witness' previous answer is perfectly clear and stands for itself.

A. That's right.

Q. Now referring to your patent, Exhibit No. 3—

Mr. Siggers: Exhibit 3 was skipped, was it not, Your Honor?

The Court: No.

Mr. Mahoney: No, No. 3 is the patent.

Mr. Siggers: Oh, pardon me.

Q. Now referring to your patent, Exhibit No. 3, please state whether or not you ever built a machine exactly like the one illustrated in the drawing forming a part of that patent? A. I confined myself as near as possible to this patent 1,194,204.

(Narrative continued.) Referring to line 34 in the machine of patent 1,194,204 this corresponds to line "P" of Exhibit 5. Line 34 corresponds to line "K" of Exhibit 4. All three lines 34 of the patent, line "P" of Exhibit No. 5, and line "K" of Exhibit No. 4 are identical in function, and all three were to be operated by a winch, drum or the like. Comparing the machine of the patent with the machine of Exhibit No. 5, particularly the bail "H" of Exhibit No. 5, with the bail 48 of

the patent both of them are connected in the same manner except that the pulling bail on Exhibit No. 5 has three links of chain in there. It is a fact that in the machine of the patent bail 48 is connected with both the dipper stick 40 and with the scoop 38 by being secured at the pivot axis of the scoop 38 on the stick 40, whereas in the machine of Exhibit 5 the bail "H" is not connected at the pivot axis of the scoop, but is connected both forward and below said pivot axis. With the bail 48 of the patent of the machine connected as shown and described in the patent it would swing the scoop on the lower end of the swing 40 if it was independently connected to the boom as in Exhibit No. 5. I mean the stick. Walter Mahoney operated our land ditching machine. No one else operated it. So far as I know he was the only one that could operate it. I judge it would take a new man quite a little while to become accustomed to it. Mr. Leary identified by the letter "C" in Exhibit No. 5 resides at Bedford, Indiana. I think his first name was Patrick. I am not quite sure about that but I think it was Patrick. I haven't seen Mr. Leary since he was on that Vincennes work. The last I heard of him he was still living at Bedford about a month or two ago. Mr. J. J. Mahoney gave me this information.

In 1913 I can't recall any railroad ditchers being built by our company. There was one or two repaired. In the year 1914 one railroad ditcher was built for the Chicago and Alton Railroad. I can't recall now how many, if any, were built in the year 1912.

Referring to Exhibit No. 9 the photograph of the Lidgerwood machine there were four power lines employed. The hoisting line raised and lowered the boom; the dipper line tipped the dipper; the swinging line swung the boom. This machine was never put in operation, I can't find any lines but the three, I said four. I can only recall three now. I omitted the hauling line for pulling the dipper toward the machine. The four lines I have mentioned were wound upon four engine driven drums. The scoop stick was attached to a bail and the bail was pivoted to the scoop. I am not quite clear the way the lines worked on this machine. It was never put in use, but think it was drawn back by extension of the dipper stick above the boom. I saw the Lidgerwood machine of Exhibit No. 9 rigged for operation at Jersey City, New Jersey, at the Lidgerwood Manufacturing Company. This was shortly after it

was manufactured. I am not positive about the date of this visit to the plant, but it was in the winter of 1914-1915. I think it was after New Year's. The records and books of the company that were turned over to Mr. Watson in 1914 are probably in the possession of the administrators. I don't know what particular books or records that were taken by Mr. Watson in 1914. He took the minute book and the record books. I wasn't really there when they were taken. I think the family of the late Mr. Watson retained possession of these papers or records after his death. I think they have them now. Either the family or the administrator. The records that were stolen, the most that was taken that I knew of was blue prints. I couldn't say as to the books. This occurred in the latter part of 1914. The blue prints were of the land ditcher and the tracings from which these blue prints were made were stolen at the same time. I think all of them were stolen, I don't know where any of them are. I think they are all gone. Referring back to Exhibits 4 and 5 concerning the presence of the strut "T" on the machine of Exhibit 4 and the absence of a similar strut on the machine of Exhibit No. 5, the reason for the absence of this strut on the machine of Exhibit No. 5 is that there was no need of it. The filling bail was hooked so far in front that it held the front end down and no need of the strut. I think the strut "T" on the machine of Exhibit 4 gave the operator trouble at times in getting the strut abuttal against the angle piece on the back of the scoop. I never personally operated any of the machines.

Mr. Edgerton: The plaintiff at this time calls for the production of the original photograph from which Exhibits No. 4, No. 5, No. 6 and No. 9 were made, and the original cut or leaflet of Exhibit No. 2. Furthermore, notice is given to the defendants that if they fail to comply with this request application will be made to the Court for production of the same.

Mr. Mahoney: The originals of the exhibits referred to in the demand by Mr. Edgerton are not within the possession or control of counsel for defendants. The originals from which Exhibits No. 4 and No. 5 were made were obtained from the witness Daniel H. Mahoney and counsel for plaintiff is free to obtain inspection of these originals if the witness can produce them. The originals from which Exhibits No. 2, No. 9, and No. 6 were made are in the possession and under the control

of the legal representatives and heirs of the Watson Estate at Vincennes, Indiana. Counsel for defendants will endeavor to produce the originals of the last named exhibits for inspection when the session is held at Vincennes, Indiana, for which notice has been served on counsel for plaintiff.

(Narrative continued.) Referring to Exhibit No. 7 I answered that letter about the day it was received or a few days later. The carbon copy of the letter which was introduced as Exhibit 8 was written for me by the Lidgerwood people. It was written in the office of the Lidgerwood Company. I know the man who dictated the letter. I think I know his name. It was Backthold. I think the initials CAB that appear at the bottom of Exhibit 8 are his initials. As to the men who were employed in our shop, my son Walter Mahoney was one, a man named Stafford, a blacksmith. I can't think of his name, we called him Smoky Stafford. And two other men—I can't remember their names now. One was a blacksmith's helper and the other fellow worked at different jobs in the shop. I couldn't say where Smoky Stafford is now. He may be at Washington, Indiana. He came to me from the B. and O. Railroad shops. I can't remember what his Christian name was. I never called him anything except Smoky. He went by that name altogether but that wasn't his Christian name. The location of our shop in Vincennes was at the B. & O. Railroad and Harrison Street. I think part of it is still there. The ground we leased from the B. & O. and they wanted it back after we got down in business, they wanted it back for some other industry. What part of it there remains I don't know. The machine of Exhibit 4 was not left on the farm south of Vincennes. It was pulled into the shop at Vincennes the next day after the test. I think it was the next day, not more than two days. The boiler was received from Dayton about two months, six weeks at any rate, after the machine got back to the shop. The machine did not remain in the shop after it was closed down that winter, it was taken to Gorham, Illinois, about the first of October in the fall of 1913.

Q. In some of your answers in the direct examination you have referred to testing the machine. What do you consider a test? A. I consider the test in the corn field.

The Court: We will stop here now. We have come to a good stopping place.

Mr. Mahoney: There is only one more page, re-direct examination, which will finish the whole examination.

The Court: All right finish it.

Thereupon, re-direct examination was read by Mr. Mahoney.

RE-DIRECT EXAMINATION by Mr. Mahoney.

(Narrative continued.) Referring to the photograph on the last page of Defendants' Exhibit No. 1 the machine shown in the photograph is shown discharging the spoil with the ditcher stick extended out beyond the plumb. The machine shown in Defendants' Exhibits No. 4 and No. 5 could be discharged with the dipper stick extended out beyond the plumb whenever the operater wished to discharge the spoil in that position.

The changes which I have testified were made in the machine shown in Defendants' Exhibit No. 4, in addition to placing the boiler thereon were made before this machine went to Gorham.

RE-CROSS EXAMINATION by Mr. Siggers.

Q. Referring to the last photograph in Exhibit No. 1 which you have stated illustrates the machine in a dumping position, the stick is then approximately at right angles to the boom, is it not, with the scoop almost directly underneath the end of the boom or boom extension? A. It is.

Q. Were you able to move the scoop out further away from the machine and still retain the load in the scoop? A. Not farther than it is now, than it is shown now.

Q. That is the extreme position of the scoop, is it? A. About.

Deposition closed.

(Certificate of Notary omitted.)

(The Court adjourned at this point until March 9, 1931, at 1:30 P.M.)

(Trial resumed on March 9, 1931, 1:30 P.M.)

The Court: Is there another deposition?

Mr. Mahoney: Yes; these are depositions taken to corroborate Mahoney's testimony.

DEPOSITIONS FOR THE DEFENDANTS
Taken at Vincennes, Indiana.

NOTICE OF TAKING TESTIMONY.

Mr. Philip E. Siggers,
918 F Street, N. W.,
Washington, D. C.

Messrs. Richey & Watts,
1090 Union Trust Building,
Cleveland, Ohio.
Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of the following people:

Frank J. Kapps, 303 N. 3rd St., Vincennes, Indiana,
Frank A. Lang, 916 Busseron St., Vincennes, Indiana,
Edgar J. Julian, 29 South 7th St., Vincennes, Indiana,
L. B. Read, 508 Main Street, Vincennes, Indiana,
Harry T. Watts, 5th and Main St., Vincennes, Indiana,
Winn Reel, 5th and Main St., Vincennes, Indiana,
D. H. Bond, 1658 Fairground Ave., Vincennes, Indiana,
William Lenahan, c/o Lenahan and Konen, Vincennes, Indiana,
Ernest Vollmer, c/o North Side Building Loan Co., Vincennes, Indiana,
Lyman Barekman, Route 7, Vincennes, Indiana,
William Stein, Westphalia, Indiana,
Mrs. Harry L. Chaney, c/o Union Depot Hotel, Vincennes, Indiana,
Robert E. Lind, 1340 Broadway, Vincennes, Indiana,
Charles B. Hartigan, Apt. No. 2, Alice Manor, Vincennes, Indiana,

all of whom reside more than one hundred (100) miles from the place of trial herein, for use on behalf of the defendant at the final hearing of this cause, before Beatrice K. Miller, a notary public in and for the county of Knox, Indiana, who is not of counsel nor interested in this cause, at the office of Beatrice K. Miller, 213 LaPlante Building, Vincennes, Indiana, on the 16th day of September, 1929, at two o'clock p.m., and thereafter from day to day as the taking of the depositions may be adjourned; and such testimony will be so taken in accordance with the provisions of Sections 863, 864 and 865

of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross-examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated September 13, 1929.

Service of the foregoing notice is hereby acknowledged this 13th day of September, 1929.

PHILIP E. SIGGERS,
Counsel for Plaintiff.

PRINTER'S NOTE:

A like Notice was issued on behalf of The General Excavator Company and was signed by Mr. Edward L. Reed.

Mr. Williams: I understand that all these depositions are going in; the deposition as a whole goes in, and if counsel have any objection, they will probably want to make them.

Mr. Richey: Whatever Your Honor wants about them.

The Court: Well, we will follow that procedure on both sides.

The following depositions were taken on behalf of both defendants, pursuant to the above notice, at the office of Beatrice J. Miller, a notary public, Room 213 LaPlante Building, Vincennes, Indiana, commencing at two o'clock P. M., Monday, September 16, 1929. Counsel for all parties being present.

L. B. READ, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is L. B. Read. I reside at 1217 Busseron St., Vincennes, Indiana. I am thirty-eight years of age. My occupation is that of photographer. I have been employed at this occupation for twenty years. I have examined these photographs just handed me and will state that I took them. There are two different photographs here.

Mr. Mahoney: For the purpose of identification I will ask the Notary to mark these photographs numbers ten and eleven.

(Narrative continued.) The photographs which have been marked for identification as numbers ten and eleven were taken on Buntin Street, between Third and Fourth on August 13, 1929. I personally took these photographs myself. I developed the negatives from which the prints were made. These negatives are now in my possession. I developed the prints from the original negatives. These photographs marked for identification as numbers ten and eleven correctly and accurately represent what they purport to show.

Mr. Mahoney: That's all.

Mr. Edgerton: No cross examination.

Deposition closed.

FRANK J. KAPPS, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Frank J. Kapps. I reside at 303 North Third Street, Vincennes, Indiana. My occupation is running a retail shoe store. I have lived in Vincennes all my life. I am sixty years old. I lived at my present address thirty years. The Defendants' Exhibit No. 5 is a ditching machine, the photograph of which was taken at the side of my residence, on Buntin Street. My house is on the corner of Third and Buntin, and that photograph was taken on the Buntin Street side between Third and Fourth. The excavation shown in the photograph was a trench for a sewer. The machine shown in photograph Defendants' Exhibit No. 5 excavated the sewer shown therein. The sewer was a branch of the City storm water sewers—one of the main lines. The machine shown in Defendants' Exhibit No. 5 is Dan Mahoney's machine. I can identify the persons shown in this photograph who are marked "A" and "B". The party marked "A" is Walter Mahoney and the party marked "B" is Dan Mahoney. The party shown in the photograph who I am marking with the letter "D" is my son Marion Kapps. I was personally acquainted with Daniel H. Mahoney and his son Walter Mahoney.

The building which you have indicated on this photograph with the letter "E" is my barn. It is still standing but is now used for a garage. The residence shown in this photograph Defendants' Exhibit No. 5 is William Lagow's. At the time the photograph was taken if I remember correctly that residence belonged to Mr. Yates. The photograph handed me marked for identification as No. 10 is the same view as shown in Exhibit 5, that is it was taken on the same location as that of Defendants' Exhibit No. 5.

Mr. Mahoney: The photograph marked for identification as No. 10 and identified by the witness is hereby offered in evidence as Defendants' Exhibit No. 10. The notary is requested to mark the same Defendants' Exhibit No. 10, photograph of buildings on Buntin Street between Third and Fourth, Vincennes, Indiana.

Mr. Edgerton: The Exhibit 10 is objected to as irrelevant.

(Narrative continued.) The photograph Defendants' Exhibit No. 10 shows the location as it now exists. I have marked on Defendants' Exhibit No. 10 the building shown in Defendants' Exhibit No. 5 with the letter "E". Comparing Defendants' Exhibit No. 5 with Defendants' Exhibit No. 2 the only change that I note on the building marked with the letter "E" is that sliding doors have been changed to swinging doors. Referring to the large brick house shown in both photographs Defendants' Exhibit No. 5 and Defendants' Exhibit No. 10 the changes which I note since photograph Defendants' Exhibit No. 5 was taken is that new porches have replaced the old porches. The fences shown in Exhibit No. 5 have been removed and hedges planted as shown in Defendants' Exhibit No. 10. The photograph just handed me marked for identification with the numeral 11 shows a view of the large house which is shown in Defendants' Exhibits 5 and 10. The photograph marked for identification as No. 11 correctly and truly represents the present condition of the building shown there. This building shown in this photograph faces Fourth Street, but the photograph has been taken from the Buntin Street side.

Mr. Mahoney: The photograph which has previously been marked for identification with the

numeral 11 is hereby offered in evidence as Defendants' Exhibit No. 11 and the Notary is requested to mark the same as "Defendants' Exhibit No. 11, photograph of house on Fourth and Buntin Sts."

Mr. Edgerton: The exhibit is objected to as being immaterial and irrelevant.

(Narrative continued.) As near as I can remember the storm sewer shown in Defendants' Exhibit No. 5 was excavated on Buntin Street in the spring of 1914. Buntin Street was paved after this storm sewer was put in. The paving of this street was completed about November, 1914. I fix that date by the fact that we had been camping, coming back I couldn't get in my barn. I actually saw the machine shown in Defendants' Exhibit No. 5 excavating the sewer shown in the exhibit. The thing about the machine that helped keep it in my mind was that the dipper drew the dirt toward the machine. Prior to seeing this machine I had never seen a machine operate in this manner. I remember that Mr. Quinn had the contract for this particular sewer shown being excavated in Defendants' Exhibit 5. Daniel H. Mahoney discussed this machine with me before it was operated on this particular job. The machine shown in Defendants' Exhibit No. 5 is a correct and true representation of the actual machine which I saw in operation at the location shown in this exhibit. The machine shown in Defendants' Exhibit 5 I know excavated this sewer on Buntin Street the entire length of the square. I have lived at 303 North Third Street where the photograph Defendants' Exhibit 5 was taken some thirty years and so far as I know of no other sewer was put in on Buntin Street between Third and Fourth Streets during that period. The only place I saw this machine in operation was in this block. The machine operated by digging towards the machine.

Q. Did the machine appear to operate satisfactorily or not?

Mr. Edgerton: The question is objected to as the witness has not been qualified as an expert and it is not believed that his opinion is competent.

A. It did.

(Narrative continued.) The photograph Defendants' Exhibit 6 which has just been handed me, shows a sewer trench, and this trench was excavated on Buntin Street between Third and Fourth. The machine shown in the

photograph Defendants' Exhibit 6 excavated all of the trench shown in the photograph. This is the same machine as that of Defendants' Exhibit 5. Referring to Defendants' Exhibit 6 this shows part of my property in this photograph which is the rear part of my lot. I have marked this part of my property with the letter "F". The letter "F" is placed on the part of my property that is the fence on the rear of the lot. The tile shown to the right in the photograph were laid in this trench. I remember that Daniel H. Mahoney discussed the machine shown in Defendants' Exhibit 5 with me before it was operated on Buntin Street stating that the machine had been used before, digging a ditch on a farm. He stated where the farm was but I don't remember now. The operation he referred to was prior to the use of this machine on the storm sewer shown in Defendants' Exhibit 5.

Direct Examination closed.

No Cross Examination.

Deposition closed.

(Taking of deposition adjourned until 10 a.m. September 17, 1929.)

Mr. Mahoney: The Exhibits 10 and 11 that were offered in evidence at the time this deposition was taken, we now offer in evidence here.

(Taking of depositions resumed September 17, 1929.)

Frank A. Lang, a witness called by defendants, being first duly sworn, testified as follows:

Direct Examination by Mr. Mahoney.

My name is Frank A. Lang. I am forty-five years of age. I reside at 916 Busseron Street, Vincennes, Indiana. I am a machinist by occupation and am employed by Lenahan & Konen. I have been employed by this firm for about twenty years, I guess. This firm is engaged in contracting and road building.

I am familiar with various types of machines, used for digging trenches and various kinds of excavating work. I have operated a steam shovel for several years, I don't recall just how long.

I have been handed a photograph of the Mahoney Railroad Ditching Machine circular Defendants' Exhibit

2. I saw the machine shown in the photograph of this exhibit about a mile south of town, on the Perry D. Green Road. The photograph to the right shows this machine on the Perry D. Green road site. Dan Mahoney manufactured the machine shown in Exhibit 2. He is the same Dan Mahoney that was connected with the Mahoney Railroad Ditching Machine Company formerly of Vincennes, Indiana. I am enabled to identify the location of this machine by the oak tree shown in the photograph, by both of these trees for that matter. I recognize J. W. Lenahan in the photograph on the right. We generally call him Will. The man on the right with the cap who has been marked with the letter "A" is Will Lenahan. Referring to the photograph shown on the left of this exhibit the man shown on the machine is Walter Mahoney. I don't believe I know this other fellow. This machine was used on the Perry D. Green Road in 1911. I fix that date because that was the year I was married. Lenahan & Sons as the company was then known had the contract for building the Perry D. Green Road. I was employed by Lenahan & Sons at that time. The Perry D. Green Road began on Willow Street, crossed over the ditch, over the top of the hill, and I don't remember now —I believe that it went straight through to Mosquito Bend. I believe that our company did some grading and clearing, on this road before the machine shown in Defendants' Exhibit 2 was used, but as to the length of time the road had been worked on I don't remember, several months I presume. But the machine shown in the photograph was used in the summer of 1911. The machine shown in the photograph Defendants' Exhibit 2 was used approximately several weeks on this road job. Mr. Mahoney wasn't so well satisfied with it and decided to take it back to the shop and make some changes on it. After it was taken back to the shop it was never used on the Perry D. Green Road again. After the machine shown in Defendants' Exhibit 2 was returned to the Mahoney shops I think it was a couple of months later before I heard again from Dan Mahoney. As to how I came to hear from him again, I think I just happened along there by his shop and he called me in. He might of called me at home, I don't remember just which way it was. He wanted to show me a sketch that he had made as to the changes in his machine. The sketch he showed me showed a machine different from Exhibit No. 2. In the sketch he changed the machine and put the boom behind the machine, on the back so that you could swing it either way you wanted it to. He pulled the bucket

toward him, and he could swing either way he wanted to dump it. He could throw the dirt on either side whereas with the machine of Exhibit 2 he had to dump the dirt behind the machine. The machine shown in Defendants' Exhibit 4 I think was the same machine which Dan Mahoney disclosed to me in the sketch that I had previously testified about. I saw the machine of Defendants' Exhibit 4. It was built by Daniel Mahoney. As to the date when this machine was completed by Daniel Mahoney, it must have been in the latter part of 1912 or the beginning of 1913. After Dan Mahoney completed this machine he took it out in the country somewhere where this picture was taken. He got a tractor engine to hook on it. I think I saw the machine before it was taken to the country. Referring to the operation of the machine shown in Defendants' Exhibit 4, I think the operation might be described as follows. The dipper was let down in the hole, there was a line on the front end of it that pulled it in the dirt to load the bucket—toward them. Then the line here pulled it up, and he had what he called the friction swing that enabled him to swing it either way, then he had another line here that tipped the bucket to dump the load, as near as I can explain it. The sheave which is marked with the letter "A" on Defendants' Exhibit 4 was hinged on the top of a stick. The stick stuck through the boom a little piece, I don't remember just how far it was now. The sheave "A" shown on Defendants' Exhibit 4 was pivotally connected to the ditcher stick in the same manner as the sheave 43 is shown pivotally connected to the top of the ditcher stick in Mahoney patent 1,914,204, Defendants' Exhibit No. 3. The machine shown in Defendants' Exhibit 4 was the first in-stroke ditcher I ever saw.

The machine shown in Defendants' Exhibit 4 was brought back from the country by Dan Mahoney. I think I saw the machine after he brought it back. The machine shown in Defendants' Exhibit 5 is that machine of Exhibit 4 after he had mounted a boiler on the chassis, and used it here in town digging a sewer trench. I don't know whether that job that the machine of Exhibit 5 was used on in Vincennes had any particular name, it was a sewer job that was going on here at that time. I don't recall the name of the contractor, but I know that Mahoney dug the biggest part of that ditch with this machine shown in Defendants' Exhibit No. 5. It was

quite a big job. I saw the machine shown in Defendants' Exhibit 5 excavating on this sewer on Main Street, between Eighth and Ninth, and, oh, I saw it in fifty different places, I don't just recall where it was at. The machine of Defendants' Exhibit 5 was operated the same as the one on Defendants' Exhibit 4 there. I would say that the trench shown in Defendants' Exhibit 5 would dig well, I saw it dig eight or nine feet, I expect it would dig deeper than that, I don't see why it couldn't. Defendants' Exhibit 5 looks like the same machine I saw operating in Vincennes on the sewer job. I recognize in Defendants' Exhibit 5 the picture of Dan Mahoney marked "B" here. I don't recall the other fellows. I recognize the man on the machine as Walter Mahoney. His position is marked by the letter "A". The machine shown in Defendants' Exhibit 5 we all thought worked good on this sewer job. It seemed to me like it was better than that trenching machine they had here. I believe it was a Buckeye. This thing dug more ditch and faster than the Buckeye machine. The machine shown in Defendants' Exhibit 5 had side fins or cutter teeth which I have marked with the letter "X" on the photograph. I think after the sewer job in Vincennes this machine was used in southern Illinois or Missouri, something like that. I don't remember whether it was used in any other work in this part of the state of Indiana, I can't remember exactly. I think the machine shown in Defendants' Exhibit 5 must have been used on the storm sewer in Vincennes in the latter part of 1912, or 1913. But it wasn't very long after we made the changes in the original machine. I am certain that the machine shown in Defendants' Exhibit 5 was used on the big storm sewer job in Vincennes.

Mr. Mahoney: At this point I wish to offer in evidence certified copies of proceedings had before the Commissioners' Court of Knox County, Indiana, showing when the Perry D. Green road contract was let and when the work was completed, and the Notary is requested to mark it "Defendants' Exhibit No. 12, certified copies of proceedings had before the Commissioners' Court of Knox County, Indiana, with reference to the construction of the Perry D. Green road near Vincennes, Indiana, in Knox County."

I am also offering in evidence at this point certified copies of proceedings had before the Board

of Public Works of the City of Vincennes, Indiana, with reference to Sewer Improvement Resolution Number One for the construction of storm water sewer system for the City of Vincennes, Indiana, showing to whom said storm sewer contract was awarded, and the date of beginning and completion of the work, and the Notary is requested to mark the same "Defendants' Exhibit Number 13, certified copy of proceedings with relation to the construction of storm sewer system number one in the City of Vincennes, Indiana, during the year 1914."

Mr. Edgerton: Exhibits twelve and thirteen are objected to as immaterial.

Direct examination closed.

No cross examination.

Deposition closed.

Mr. Mahoney: Defendants' Exhibits 12 and 13 that were offered in evidence at the time the deposition of Frank A. Lang was taken are hereby offered in evidence here as Defendants' Exhibits 12 and 13.

The Court: What do these two exhibits show?

Mr. Mahoney: Why, the first Exhibit, No. 12, shows when the work was started on the Perry D. Green road.

The Court: When was that?

Mr. Mahoney: I haven't looked at them recently, but I think I could tel' –

The Court: When does it show that that job was completed?

Mr. Mahoney: The resolution for the carrying on of this work was adopted on the 23rd day of February, 1914.

The Court: When was the job completed?

Mr. Mahoney: On the 7th day of April the Board of Public Works,—the contract of construction was let to J. J. Quinn, contractor. Apparently it was accepted on this 7th day of April, 1914.

The Court: Well, that is the letting of the contract. Does that show when the city accepted the job?

Mr. Mahoney: Well, here is the estimate. The first estimate shows it was paid for during the month of May, 1914.

The Court: So some of the work was done before that date.

Mr. Mahoney: Yes, sir. And then here is an entry or notation from the record of the Board of Public Works, which is dated November 23, 1914, which states that the city engineer reports to the Board of Public Works the completion of this storm sewer No. 1, and submits final estimate.

The Court: Well, you would be entitled to the date of the first estimate.

Mr. Mahoney: Yes, first estimate.

WINN H. REEL, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Winn H. Reel. I reside at 17 N. Ninth Street, Vincennes, Indiana. I am forty-six years of age. I am a civil engineer. I have been county surveyor of Knox County from the year 1913 to the year 1918. The photograph Defendants' Exhibit 5 handed to me is a photograph of a machine I saw in operation on the Linneweber ditch east of Westphalia, Knox County, Indiana. It was Mr. Mahoney's machine. This blue print which has been handed to me shows the alignment of the Linneweber ditch. I made the location blue print for this Linneweber ditch map. I am the Winn Reel mentioned as engineer on this map dated March, 1914. The map shows a ditch called Gottlieb-Linneweber Ditch. This is the ditch I have previously referred to as the Linneweber Ditch. This was the ditch that I saw the Mahoney machine Defendants' Exhibit 5 excavating. The Mahoney machine finished this ditch. The machine operated satisfactorily in the digging of this Gottlieb-Linneweber Ditch. I don't believe that I can tell the exact date that I saw the Mahoney machine operating on this ditch, I think it was in 1915. The dipper on this Defendants' Exhibit 5 machine pulled the dirt toward the machine. This was the first machine I ever saw in which the dipper was pulled toward the machine in excavating. I do not recognize any of the persons shown on Defendants' Exhibit 5 unless the party marked "B" was Mr. Mahoney. I don't know who had the contract for the Gottlieb-Linneweber Ditch near Westphalia. I do not remember the nature of the soil on which this machine operated at this point.

Mr. Mahoney: The blue print which has just been identified by the witness as being a location map of the Linneweber Ditch, Knox County, Indiana, dated March, 1914, is hereby offered in evidence and the Notary is requested to mark the same "Defendants' Exhibit No. 14, Map of Linneweber Ditch, Knox County, Indiana, dated March, 1914."

Direct examination closed.

No cross examination.

Deposition closed.

Mr. Mahoney: The location map which was offered in evidence during the taking of the above deposition is hereby offered in evidence as Defendants' Exhibit No. 14, map of Linneweber Ditch, Knox County, Indiana, dated March, 1914.

Mr. Mahoney: We next offer the deposition of Robert E. Lind.

The Court: These two patents were in the Patent Office at the same time, weren't they?—Mahoney and Clutter?

Mr. Mahoney: Yes; one filed a day after the other.

Mr. Corbett: Well, I want to say, Your Honor, that the Mahoney patent was not cited against the Clutter application, however, although it issued before.

Mr. Richey: Neither was any interference declared between the two, which is the practice in the Patent Office when two patents are pending which claim the same invention.

Mr. Corbett: The point about that is that they must claim the same subject matter. Some question whether they were or not. Of course, there is always a possibility of a slip-up, and the law provides that in case there is no interference, it is possible to declare an interference between the issued patent and the pending application. In case one patent comes out, and one man wants to get an interference with that patent, he can do that. I don't want to confuse the issue, but just to make the matter clear.

The Court: I am glad to have those statements from counsel.

ROBERT E. LIND, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Robert E. Lind. I am forty-six years of age. I reside at 340 Broadway, Vincennes, Indiana. I am a civil engineer. I have held various county offices in Knox County, Indiana. I was county surveyor and engineer in 1911 and 1912; city engineer of Bicknell, Indiana, in the years 1920, 1921, 1922, 1923, 1924 and 1925. The machine shown in Defendants' Exhibit 5 I have seen, or one very similar to it, near Gorham, Illinois. I can't fix the exact date I saw this machine but to the best of my recollection it was some time in the early fall of 1912, or the spring of 1913. The machine I saw at Gorham, Illinois was represented to me as belonging to Daniel Mahoney. I don't know whether Daniel Mahoney accompanied me to Gorham or met me there but he was with me when we looked at the machine. Mr. August Bouvy accompanied me to see this machine at Gorham, Illinois. Mr. Bouvy is now dead. When we got to Gorham we found the machine at the site of a small drainage ditch, possibly one or two miles from Gorham. The machine was not in operation when we saw it at Gorham. From the machine's location it was my opinion that it had been in operation at that particular point. We examined the machine and the ditch. After we examined it I formed an express opinion that the machine was very suitable for excavating small ditches, and observed that the work which had previously been performed was very satisfactory.

CROSS EXAMINATION by Mr. Edgerton.

I did not at any time see the machine illustrated in Defendants' Exhibit No. 5 in operation. My conclusions as to the operability of the machine were partly based upon my opinion, and on the premise that the ditch shown to me at Gorham had been dug by this machine. I do not know of my own knowledge that the ditch adjacent to the machine at Gorham had been excavated by the machine. Mr. Daniel Mahoney explained the mode of operation of this machine to me.

Deposition closed.

(At this point the deposition session was adjourned until ten a.m. September 18, 1929.)

(Deposition session resumed pursuant to adjournment September 18, 1929.)

(Recess taken until two p. m. September 18, 1929.)

(After recess deposition session was resumed.)

WILLIAM F. STEIN, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is William F. Stein. I am fifty-three years old. I reside at Westphalia, Indiana, Knox County. My occupation is that of farmer. The blue print which has been handed me is a blue print of a ditch in Westphalia that my neighbor and I contracted for re-cleaning and enlarging. The name of the ditch shown on the blue print is Gottlieb-Linneweber. Mr. Ed. Sillwault was the name of the other man that had the contract with me for this ditch. I think this contract was let August 1, 1916. It was either 1915 or 1916, we completed it in April the next spring. The ditch was contracted to be dug with teams. But we made such slow headway, we sublet to Uncle Dan Mahoney, or Daniel Mahoney along about September 15, that is the year the contract was let. Before Mahoney took over the sub-contract about eighty rods of the ditch had been dug by teams. In digging this ditch with teams the condition of the soil was so tough—gumbo. Mahoney dug the ditch by machine. The total length of this ditch which Mr. Sillwault contracted for was practically two miles with tile. The machine shown in Defendants' Exhibit 5 shows the machine before it was taken—dismantled, from the trucks, when we hooked the teams up to it and transported it from the railroad switch at Westphalia to the place where we proceeded to put skids under it, straddle the ditch and put it to work. The machine shown in Defendants' Exhibit 5 completed the ditch shown in the blue print Defendants' Exhibit No. 14. I actually saw the machine shown in Defendants' Exhibit 5 excavating the ditch of Exhibit No. 14. Referring to the photograph Defendants' Exhibit 5 the gentleman marked with the letter "B" looks to me to be Uncle Dan Mahoney. The gentleman with the derby is Walter Mahoney, his position is indicated by the letter "A". The dipper of this machine dug to the machine. It was the first machine I ever saw in which the dipper dug towards the machine. Walter Mahoney operated the machine

shown in Defendants' Exhibit 5 on the Linneweber ditch at Westphalia, Indiana. This machine performed good work, done its duty without kick and didn't have any trouble getting it received. The commissioner in charge made the remark that it did better work than we did with the teams. The machine operated very fast. Referring to Defendants' Exhibit 14 the ditch started on section line 29, the north line of Mr. Fred Armouth and the south line of Mr. Charles Neidringhaus. That is, it started on the north side of Armouth farm, that was on the east side of the ditch on Nora Hildebrand's—pardon me, let me explain—It ended near the Rock Road running east and west, being the section line between sections seventeen and twenty; and sixteen and twenty-one. I have taken a pen and traced on the map Defendants' Exhibit 14 the point where the Mahoney machine began the excavation of this ditch and have stopped where the Mahoney machine stopped or where it completed this ditch. After the machine shown in Defendants' Exhibit 5 completed the Linneweber ditch, it was left on my ground at the head of the ditch—well, for about two years, as near as I can tell. After that it was taken to Edwardsport, there the Indiana Light and Power Company used it and part of it to excavate some dirt for the plant. Referring to the Linneweber map Defendants' Exhibit 14 the point where the Mahoney machine stopped this ditch was a tile ditch from there on. That is, a ten inch tile that tapered to an eight. Before the Mahoney machine shown in Defendants' Exhibit 5 was used on the Linneweber ditch I saw it operate on South Main Street, Vincennes, Knox County, Indiana. At the time I saw it it was digging a trench for a sewer.

Mr. Mahoney: I hereby offer in evidence as "Defendants' Exhibit Number 15, a Certified Copy of certain portions of the records appearing on Order Books One and Two of the Record of Ditches and Levees of the Knox County Circuit Court, Indiana," and the Notary is requested to mark the same, "Defendants' Exhibit No. 15, Certified Copy of proceedings had with relation to the construction of the Linneweber ditch at Westphalia, Indiana."

Cross Examination by Mr. Edgerton.

(Narrative continued.) Referring to Defendants' Exhibit 14 the tile extension that is the portion of the drain beyond which the Mahoney machine was employed

averaged probably ten feet in depth. The ditch that the Mahoney machine dug had a four foot bottom two to one slope, from eight foot deep at the outlet, five foot at the head, probably twenty foot wide at the head and twenty-eight at the outlet. The tile ditch at the point where it emptied into the open ditch was three feet deep on the level. By "on the level" I mean this tile was laid in an old open ditch probably a foot and a half to two feet deep. This being with the level of the soil would run the tile probably three or three and a half feet. In my previous testimony when I stated that the Indiana Power and Light Co. used it and part of it to excavate some dirt, I meant that I saw the machine torn apart, some of the machinery was used, the boiler being an upright was standing on a frame, the hoisting engine was, and the boom, the swing apparatus was used and was at work without this boiler, this boiler being exposed to the outdoor atmosphere for practically two years hadn't been used made it become scaly and discarded. The rest of the machine was used at the time when I was at the plant. When I stated that the rest of the machine was used except the boiler I meant that the source of power was derived from a new boiler which replaced the old boiler. The Mahoney machine stood idle while the three and a half foot tile extension was cut for a period of two years after it had completed the excavation.

Cross examination closed.

Deposition closed.

DAVID H. BOND, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is David H. Bond. I am sixty-five years old. I reside at 1658 Fairground Avenue, Vincennes, Indiana. My occupation is sewer contractor. I was superintendent of sewers of the City of Vincennes, Indiana, from 1913 to 1919. I was superintendent of sewers at Vincennes when Storm Sewer System No. 1 was installed. The contract for that work was held by Mr. Quinn and Thornberry—I don't remember whether that was Mr. J. B. Quinn. I think it was J. B. Quinn, I am not positive. This photograph Defendants' Exhibit 5 looks by the picture that it was on Broadway. May I reverse that answer, I am wrong there? Buntin Street, I

got the two streets mixed. That was Mr. Mahoney's machine in Exhibit 5, I don't remember his first name. I can positively identify Jack Lahay on that photograph Defendants' Exhibit 5. (Witness indicates party marked C.) The machine shown in Defendants' Exhibit 5 worked on Storm Sewer No. 1 in the City of Vincennes. I saw it digging trenches on this job. This Storm Sewer No. 1 was a large piece of work. The machine operated so as to dig toward the machine. To the best of my remembrance this machine in depth had taken out eight feet. As to how this machine worked I heard no complaint. I remember this machine dug quite a bit of the deep work on Buntin Street.

No cross examination.

Deposition closed.

(At this point the deposition session was adjourned until ten a. m. September 19, 1929.)

(Deposition session resumed at ten a. m. September 19, 1929.)

JOHN W. LENAHAN, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is John W. Lenahan. I am usually called William Lenahan here in town. I am forty-six years of age. I reside at 902 Buntin Street, Vincennes. My occupation is contractor. I am a member of the firm of Lenahan and Konen. Defendants' Exhibit No. 2 on the right hand side the picture of this machine was taken on the Perry D. Green Road which was built by my father in 1911. In the photograph to the right on this exhibit I can identify the picture of myself and Mr. Mahoney. My picture is at the right rear wheel of the machine indicated by the letter "A" on the photograph. Mr. Mahoney is standing across the trench from the machine with a derby hat. Mr. Mahoney's first name shown in that photograph was Dan. I do not remember how long the machine shown in that photograph was used on that road by our company. Photograph Defendants' Exhibit 5 shows a design of a machine as I saw it in operation on the storm sewer in Main Street. This was Daniel H. Mahoney's machine formerly of Vincennes. On this photograph I recognize Dan Mahoney who is indicated

here with the letter "B" and his son Walter Mahoney, he's on the machine, indicated by the letter "A". The dipper on the machine shown in Defendants' Exhibit No. 5 dug to the machine.

No cross examination.

Deposition closed.

LYMAN H. BAREKMAN, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Lyman H. Barekman. I live in Vincennes Township, Route 7, Woodland, a subdivision of Vincennes, I don't live in the city. I will be seventy-eight years old the fifteenth of November. My occupation most of the time has been that of carpenter. Defendants' Exhibit 5 shows Dan Mahoney there. Well, yes, that there, to the best of my knowledge is his machine. I saw that machine operating down in southern Illinois. The name of the town was Gorham, Illinois. I was connected with the work on which this machine was operating at the time I saw it at Gorham, Illinois. I was working for William H. Vollmer. This machine was working on a small lateral ditch at Gorham. The ditch was started with teams and when the Mahoney machine was put on there to work I might say between one and two hundred feet had been dug. There wasn't very much of it dug. As to the width and depth of this ditch, it was kind of a curious ditch. Where it ran five feet deep it was three feet at the bottom and twenty-two feet at the top, and where it was shallower it did not need to be so wide. As to the reason we stopped work on this ditch with teams, well there was two or three reasons. Why it was gumbo and sticky. When we plowed through it the teams would go in it, and all ball up and you couldn't make any headway. I actually saw the machine shown in Defendants' Exhibit 5 digging a ditch at Gorham. I had charge of digging the ditch. I do not remember the exact year that I saw this machine operating at Gorham, but to the best of my recollection, it was about 1913, and it was along about the fall of the year, it must have been in October. I fix the date as in the year 1913 that I saw this machine operating in Gorham because of several things. I was in the hospital in 1913, and I think it was that fall I went down there. Then I

got a folder I got at East St. Louis that year. I have the folder with me and hereby produce it. This St. Louis and Southwestern time table, dated September, 1913, has been in my possession since I made my trip out there with the Mahoney machine at Gorham, Illinois. I had no other chance to get that. That was the only time I had ever been over the route. I had other records that related to this Gorham, Illinois, job but I have had them destroyed, I guess. I didn't think anything would ever come up. I destroyed my old papers last spring but I couldn't say about those records. That was before anybody said anything to me about this case. I made a search for these records but the St. Louis and Southwestern time table was all that I was able to find.

Q. Have you got any receipt, or anything, to show the year you were in the hospital.

Mr. Edgerton: Question objected to as leading.

A. I have a receipt from the Doctor when I paid him.

Q. What is the date of the receipt? A. If I remember right it was July, 1913.

Q. Have you got the receipt with you? A. No, I haven't it with me.

Q. Can you produce the receipt? A. Why I could if I was at home.

(Narrative continued.) I was at Gorham twice, the first time I don't just remember the date. I went before we had taken the ditcher down there, but I don't just remember how long may be two or three weeks. Mr. Mahoney and I brought the ditcher down there for Mr. Vollmer. This was Dan Mahoney. The instructions I received about getting the ditcher down there from Mr. Vollmer were that when I got to St. Louis I was to hunt the machine up and have them ship it at once, because it might lay there a week or two before it was shipped out. When I got to St. Louis I went to the freight depot —he told me he would have it shipped out after dinner; it was right noon then. The machine had been shipped from Vincennes to Gorham. I don't remember just exactly how long it was from the time the machine left St. Louis until it reached Gorham. It was a few days. I was at Gorham when the machine arrived there, and so was Dan Mahoney. When the machine arrived at Gorham it was unloaded and taken to where we were going to operate it. As soon as the machine was ready we put it

right to work. I don't just remember how long the machine was operating while I was at Gorham. I suppose —I'd say something like four weeks. By that time I'd say something like eight hundred or a thousand feet had been dug with this Mahoney machine. The machine did good work on this job. The reason I left Gorham is I didn't like the place, and I didn't think I was getting money enough to be aggravated with the crew I had. While I was there we had several men operating the machine, but I don't remember any of their names.

(Recess.)

Q. Mr. Barekman, during recess you made a trip to your home for the receipt for hospital expenses mentioned in your previous testimony, did you locate the receipt? A. Yes, sir.

Q. Will you kindly produce it?

Witness produces receipt.

(Narrative continued.) The machine shown in Defendants' Exhibit 5 dug to the machine. My best recollection of the time I quit my job at Gorham, Illinois, I just couldn't say, I know it was getting cold weather. It must have been some time along November, 1913. I never went back there after November, 1913.

Mr. Mahoney: The St. Louis & Southwestern Railway Co. time table or folder dated September, 1913, which the witness has produced is hereby offered in evidence as Defendants' Exhibit 16, and the Notary is requested to mark the same "Defendants' Exhibit 16. St. Louis & Southwestern Railway Co. time table dated September, 1913."

The receipt which the witness has produced for hospital expenses, dated July 24, 1913, is hereby offered in evidence as Defendants' Exhibit No. 17, and the Notary is requested to mark the same "Receipt for hospital expenses of L. Barekman, dated July 24, 1913, at Vincennes, Indiana, signed J. P. Ramsey, Defendants' Exhibit No. 17."

Mr. Edgerton: Exhibits 16 and 17 objected to as insufficiently proven.

It is stipulated by and between the counsel that in as much as the St. Louis and Southwestern Railway time table dated September, 1913, has quite a large number of pages therein, for the second deposition a photostat of the outside cover and the page containing time table num-

ber one, may be substituted for the original. The original time table, however, to be filed with the original deposition.

Direct examination closed.

No cross examination.

Deposition closed.

Mr. Mahoney: During the taking of the deposition of Daniel H. Mahoney, page 86, a request was made by counsel for plaintiff for the production of the original photographs from which Exhibits Four, Five, Six, and Nine were made and the orignal cut or leaflet of Exhibit Two. Counsel for Defendants hereby submit the originals from which said exhibits were made to counsel for plaintiff for inspection.

Ernest Vollmer, a witness called by defendants, being first duly sworn, testified as follows:

Direct Examination by Mr. Mahoney.

My name is Ernest H. Vollmer. I am fifty-seven years of age. I reside at 516 North Tenth Street, Vincennes, Ind. My occupation is with the North Side Building and Loan Association. I had a brother named William Vollmer who is now dead. My brother William Vollmer was interested in drainage contract work, in the State of Illinois. He was associated in this Illinois drainage work with Mr. Spiker, I think his name was Jacob. Mr. Spiker lived in the City of Vincennes. My brother was also a resident of Vincennes. The place where the drainage work was located that my brother was interested in was at Gorham, Illinois. I don't remember to whom the contract for this drainage work was let. I think though it was Mr. Joe Harding. One of the Hardings, Hugh Harding. Mr. Spiker is dead. I went down to Gorham, Ill. several times with relation to this drainage work. I was sent down there by brother Will. The first time I went down there was on the 7th day of June, 1913. I was sent down there to look after the ditch, the dredge boat ditch, hiring men. I took Lyman Barekman down there with me. He was taken down there to superintend the work down there on a lateral ditch. What we called the team ditch. The work on this ditch was started with teams. I don't remember how much work the teams did on this ditch, but they couldn't get along with the teams there so they quit the job. The way they

completed the ditch is that they got a ditcher down there to dig it out with. The machine was Dan Mahoney's machine of this city. The machine shown in Defendants' Exhibit 5 is the ditcher that was used at Gorham. Mr. Mahoney and Mr. Barekman went down with the machine from Vincennes. As to whether the machine shown in Defendants' Exhibit 5 completed the lateral ditch at Gorham, I couldn't say only they told me it finished it. I was never there after that. I took Mr. Barekman out there to take charge of this lateral ditch on the 30th day of September, 1913. I came back from there on the 2nd of October, 1913. I fix the dates that I have just given from my books where I have it down the time that I made the trips. I cannot tell you exactly to the day the date the machine shown in Defendants' Exhibit 5 was sent to Gorham. It might be the first or along about the second week in October, 1913. Barekman came back to Vincennes and was in Vincennes when the machine was shipped to Gorham. The reason he came back to Vincennes is that he could not do anything down there with the teams. Then the machine was sent out there. Barekman went with the machine. I do not know how long Barekman stayed there after he brought the machine back to Gorham, because I had nothing further to do with the matter after that time.

Cross Examination by Mr. Edgerton.

Q. You have testified that you went to Gorham on September 30, and returned on October 2, 1913, and that you made book entries of these dates, how recently have you referred to the book to which you refer? A. Well, it might be in the last three or four weeks.

Q. Is this an account book of the negotiations on this contract at Gorham? A. I don't understand the question.

Q. Did the book in which you made these entries pertain to the Gorham ditching contract? A. Not the ditching contract, no, sir.

Q. Well, any other matter relating to this ditching enterprise? A. Yes, sir, my time, that's the only thing.

Q. You still have that book in your possession? A. Yes, sir.

Cross examination closed.

Deposition closed.

(At this point the deposition session was adjourned subject to notice.)

Certificate of Notary omitted.

Mr. Mahoney: We offer in evidence depositions of L. B. Read, Frank J. Kapps, Frank A. Lang, Winn H. Reel, Robert E. Lind, William Stein, David H. Bond, John W. Lenahan, Lyman Barekman, Ernest Vollmer and Defendants' Exhibits 16 and 17 offered in evidence at time of the taking of said depositions.

DEPOSITIONS FOR THE DEFENDANTS

Taken at Murphysboro, Illinois.

NOTICE OF TAKING TESTIMONY.

Mr. Philip E. Siggers,
918 F Street, N. W.,
Washington, D. C.

Messrs. Richey & Watts,
1090 Union Trust Building,
Cleveland, Ohio.
Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of the following people:

Thomas G. Dunn,	Gorham, Illinois,
Joseph Moschenrose,	Gorham, Illinois,
William Bradshaw,	Gorham, Illinois,
Henry Stone,	Grand Tower, Illinois,
George Stone,	Gorham, Illinois,
George DeRemo,	Carbondale, Illinois,
Joseph Glenn,	Gorham, Illinois,
C. Crane,	Gorham, Illinois,

all of whom reside more than one hundred (100) miles from the place of trial herein, for use on behalf of the defendant at the final hearing of this cause, before Madoline Johnson, a notary public in and for the County of Jackson, Illinois, who is not of counsel nor interested in this cause, at the Court House, Murphysboro, Illinois, in the County Court Room on the second floor of the building on Thursday, the 17th day of October, 1929, at two o'clock p. m., and thereafter from day to day as the tak-

ing of the depositions may be adjourned; and such testimony will be so taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated October 14, 1929.

Service acknowledged October 15, 1929.

RICHEY & WATTS.

PRINTER'S NOTE:

A like Notice was issued on behalf of The General Excavator Company and was signed by Mr. Edward L. Reed.

The following depositions were taken on behalf of both defendants, pursuant to the above notice, at the Court House, Murphysboro, Illinois, in the County Court Room, before Madoline Johnson, a Notary Public, in and for the County of Jackson, Illinois, commencing at two o'clock P. M., Thursday, the 17th day of October, 1929. Counsel for all parties being present.

WILLIAM BRADSHAW, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is William Bradshaw. I am thirty-eight years of age. I reside at Gorham, Illinois. I am a rural mail carrier. I have lived at Gorham, Illinois, since 1891.

The photograph, Defendants' Exhibit 5, I declare I thought this machine run on skids. It was an upright boiler that make of a drag line. That's what we call it, I don't know what other people call it. I seen a machine like that in the photograph, except that I thought that it run on skids instead of on wheels. Otherwise, it is the same machine in looks. I saw this machine in Brushy Arm near Gorham, Illinois. The machine was in operation when I saw it. The machine was doing what I call good work at the time I saw it. It was working smoothly. It was working on a ditch excavation. I can't recall the date exactly that I saw this machine operating near Gor-

ham, Illinois. I think it was about the year 1913. As to the direction the dipper dug on this machine, the best I can remember, it threw out and drawed the dirt to the machine. I believe that was the first shovel I ever saw that dug towards the machine.

The ditch on which this machine worked at Gorham ran along the Henry Arbeiter Farm, and I believe that other land was owned by Madden or Mayden. I would judge it to be about three quarters of a mile from the city limits of Gorham.

CROSS EXAMINATION by Mr. Edgerton.

Q. You have testified as having seen the Defendants' Exhibit 5 in operation. I now hand you a photograph, formerly introduced in this suit and identified as Defendants' Exhibit 4. Will you please state whether this photograph illustrates the machine you have previously referred to? A. The machine that worked there didn't have a top cab over engine and I believe it had skids under it, the best I can remember.

Q. Please compare the structure of the scoop and state which exhibit illustrates the machine, according to your recollections? A. Number five, because the best I can remember, the scoop pulled towards the machine in loading.

Q. Were you employed as one of the crew working on this machine? A. No, sir.

Cross examination closed.

Deposition closed.

JOSEPH MOSCHENROSE, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Joseph Moschenrose. I am fifty-two years old. I reside at Gorham, Illinois. I am a meat cutter at the present time. I was raised at Gorham, Illinois, I have been there fifty-two years. I saw the machine shown in the photograph Defendants' Exhibit 5 in operation at Gorham, Illinois. They was digging a ditch with it, drainage ditch, I guess you would call it. As to the location of this drainage ditch with reference to Gorham, it would be in the southeast part of Gorham, I believe, now let me get this right. It's in the south part of Gorham running west. This drainage ditch ran

through the Moschenrose and Arbeiter farms. I think that is as far as it reached. The Moschenrose farm I have mentioned was my father's. The drainage ditch near Gorham was dug either the latter part of 1912 or in 1913, if I remember right. As I remember it, it was in the winter when I saw it, along kind of cool weather. When I saw it operating a fellow by the name of George DeRemo was running it. The machine was started at the mouth of the other ditch, at the mouth of the old original ditch. When I seen it the ditch was being excavated by machine. I didn't see the first dipper full taken out. When I saw the machine operating the first time it was about a hundred feet from the main ditch which it emptied into. The machine when I saw it operating, the dipper was throwed out that way and dug to the machine. The machine in Defendants' Exhibit 5 finished the lateral ditch which I saw it operating on. At the time this lateral ditch was dug by the machine there was no road alongside of it. There is a road there now which was built about six years ago to my best remembrance or knowledge. The soil at the point where this ditch was excavated by the machine shown in Defendants' Exhibit 5, was black, sticky land, gumbo I call it. The machine was working nicely in this soil when I saw it.

No cross examination.

Deposition closed.

C. Crain, a witness called by defendants, being first duly sworn, testified as follows:

Direct Examination by Mr. Mahoney.

My name is C. Crain.

Mr. Mahoney: In the notice for taking these depositions, this man's name was given as C. C-r-a-n-e. Does Counsel for Plaintiff waive the misspelling of this name in the notice.

Mr. Edgerton: Yes.

(Narrative continued.) I am fifty-nine years of age. I reside at Gorham, Illinois. I am a lumber dealer. I have lived in Gorham, Illinois, since 1903. I saw a machine like that shown in the photograph Defendants' Exhibit 5 working on a ditch about a half mile due south from Gorham, Illinois. At the time I saw the machine it was digging this ditch near the Moschenrose farm. It

was operating when I saw it. I think the machine was Mahoney's. The year I saw this machine operating near Gorham was around 1912 or 1913. At that time I was engaged in the general merchandise business. I sold the men running this machine groceries. I haven't got any records to show this because these records all got destroyed in the cyclone. At the time I saw this machine operating near Gorham, Illinois, it was being operated by a fellow by the name of DeRemo. The soil at that point I would call gumbo. When I saw the machine operating I thought it was doing mighty nice work. The scoop or dipper on this machine dug towards the machine. That was the first machine I ever saw in which the scoop or dipper dug towards the machine. I think this machine finished the ditch at Gorham.

No cross examination.

Deposition closed.

(At this point the deposition session was adjourned until ten o'clock October 18, 1929.)

(Deposition session resumed October 18, 1929.)

Henry Stone, a witness called by defendants, being first duly sworn, testified as follows:

Direct Examination by Mr. Mahoney.

My name is Henry Stone. I am sixty years old. I reside at Grand Tower, Illinois. I am a farmer. I do not live in Grand Tower but live in Grand Tower Township, and have lived there for forty years. Where I live is three miles from Gorham, Illinois. I don't know whether I ever saw the machine shown in Defendants' Exhibit 5 or not, saw one something like it. The machine I saw was something like it, I don't know whether this is the machine or not. It was in a ditch running west on the Moschenrose place. It was about the line of the Moschenrose place and Henry Arbeiter place. The machine was operating when I saw it. I think the ditch it was operating on would be about a mile from Gorham. When I saw this machine operating near Gorham the dipper was pulled to the machine, that is it dug towards the machine. At one time I saw the machine operating, the man operating it was DeRemo. The first time I saw it operating I didn't know that man. The soil where this ditch was excavated was gumbo. As to the year I saw this machine operating the best I remember is, it was 1913. I

do not remember the time of the year. When I saw this machine on this job, it was operating all right, as well as any of them.

CROSS EXAMINATION by Mr. Edgerton.

Q. In your last answer you stated as well as any of them, were any other machines working on this ditch? A. No, sir.

Q. Had you observed the operation of other machines about that time, that is, in the excavation of ditches? A. No.

Q. Then why did you say this machine worked as good as any of them? A. I'll say this much that I'd saw other machines work.

Q. Do you mean that you saw other machines work in the years 1912, 1913, 1914? A. I don't remember.

Cross examination closed.

Deposition closed.

JOSEPH T. GLENN, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Joseph T. Glenn. I am sixty years old. I reside at Gorham, Illinois. I am a farmer. I have lived at Gorham, Illinois, since January, 1901. I have seen the machine shown in Defendants' Exhibit 5 just outside of Gorham—just outside the corporation on the Arbeiter farm. When I saw it the machine was cutting a ditch. It was just a little open ditch.—Mr. Mahoney owned this machine, claimed he was the inventor of it. I got fairly well acquainted with Mr. Mahoney. Mr. Mahoney's picture is shown in photograph Defendants' Exhibit 5, the person marked with the letter "B". My team hauled water for this machine for a short time while it was digging this ditch near Gorham, Illinois. As to the year this machine excavated this ditch, the best I can figure out, it was in 1913, that's the best I can figure, I haven't got nothing to refer to. I kept records at the time my team did the hauling for this machine but these records went off in the cyclone that occurred on March 18, 1925. My home was completely demolished in that cyclone. Everything I had was destroyed, I had nothing left only what I had on.

I saw Mr. Mahoney the old gentlemen operate this machine at Gorham, and there was another one or two, then his son, I believe his name was Walter, and George DeRemo, that's all I knowed that operated it. I remember why Walter stopped operating the machine. He got into a fight with a man up in a saloon, tried to cut him with a knife, the Marshal told him he better leave—get out of there. After that I don't just exactly know whether Paddy took it next or not. By Paddy I refer to George DeRemo. The soil where this machine excavated was gumbo. This is hard soil to work in. The Mahoney machine under these conditions cut the ditch—it done the work. The Mahoney machine finished this ditch near Gorham. The scoop on this Mahoney machine when I saw it operating near Gorham dug to the machine.

No cross examination.

Deposition closed.

GEORGE STONE, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is George Stone. I am thirty-six years of age. I reside at Gorham, Illinois, and have lived there all my life. I am in the oil business, run a Standard Oil Filling Station. I am the son of Henry Stone that lives in Grand Tower Township. I have seen a machine like that shown in Defendants' Exhibit 5, the machine I worked on there looked like that machine. The machine I worked on was located south of Gorham near the Moschenrose farm, or was at that time I believe. When I worked on this machine they were digging a small ditch. I was just a helper around the machine. I worked on this machine at Gorham, Illinois, something like a week or ten days. I don't remember the exact days. The man running the machine was Paddy DeRemo, I believe it was. Tommy Bush and Ollie Smith worked on this machine at that time. Tommy Bush is dead, and Ollie Smith I haven't heard from him—I don't know where he is. George DeRemo is now at the State Farm near Carbondale. I mean the County Farm I believe it is. He had a spell of sickness of some kind that disabled him from his regular line of work. The dipper on the ma-

chine shown in Defendants' Exhibit 5 when I worked on it near Gorham dug to the machine. As to the date the machine excavated the ditch near Gorham, it was in 1913, might have been part of 1914, I don't know about that. I think it was in the latter part of the year 1913. The soil where this machine operated near Gorham was gumbo. The machine worked all right what time I was there.

No cross examination.

Deposition closed.

GEORGE DEREMO, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is George DeRemo. I am forty-nine years old. I reside at the County Farm near Carbondale, Illinois. Before I became disabled I was working for the Iron Mountain. At that time I was living at Sand Ridge, Illinois. Before I became disabled my occupation was hoisting engineer and also painter and carpenter. I have had experience in operating excavating machinery, I have operated all the way from steam shovels to dredge boats, and from a dredge boat down to a lateral ditcher. The machine shown in Defendants' Exhibit 5 I saw at Gorham, Illinois, close to Leo Rock. I would judge Leo Rock is a mile or a little better from Gorham. I operated this machine and put it to work. I came there after they had unloaded it and brought it down. It was used on a lateral ditch. Dan Mahoney owned the machine. I became acquainted with Dan Mahoney after he came on the job. Dan Mahoney is shown in the photograph, Defendants' Exhibit 5, the person indicated by the letter "B". The farms which the ditch was located on that this machine excavated, Phillip Moschenrose farm was on the north side where we started, and if I ain't sadly mistaken the nearest I can remember Ardell Wells farm was on the other side. When we come to the end of the ditch we ran across some of the Arbeiter farm. We ran in this farm before we got to the end. The machine commenced on the end of the ditch, because there wasn't anything dug there, but with horses, they dug a little out with horses. The machine started to excavate near the mouth of the ditch where it emptied

into the main ditch. The soil at the place where the machine excavated this ditch was gumbo. Gumbo is a black soil, sticky and waxy. It is hard to excavate. I operated this machine on this ditch near Gorham and finished the ditch with the machine. Some of the men that worked with me on running this machine near Gorham were Tommy Bush and Dan Neace. Bush and Neace are both dead now. Bush craned for me. By that I mean he dumped the dirt out of the dipper when they swing out. This was done by a line. Dan Neace fired the boiler on the engine, and I operated the machine. The machine is operated with levers. One lever to load the dipper and another one to hoist the boom. To load the dipper, you pull in with a loading line run from the dipper back through the sheaves, and through the boom and back on the drum of the engine. The loading line is here. (Witness indicates the line marked "L" on Defendants' Exhibit 5.) Chain bar here on the dipper and there is a sheave in the middle of it, and one end of the line goes through the sheave and the other end anchors on the boom. After the dipper was loaded it was dumped with a tail line, that was anchored on the end of the boom and came down through a sheave on the back end of the dipper, then it ran up on the boom through another sheave "N" on the boom, then it run across to the mast pole through another sheave, then it run down to the niggerhead. The niggerhead is a spool on the end of the drum. The dipper on this machine dug towards the machine. You could dump your dirt on either side, it didn't make any difference. To swing the boom to unload they would swing one way just as easy as they could the other way. It didn't make any difference in the swinging. To operate the machine so as to swing the boom to the side to unload, you do it with a lever—with a friction lever. You could throw your lever one way and the boom would travel that way, throw your lever the other way and it would travel the other way. It's a friction feed. See, you throwed your lever over there and it would press against a friction on one drum, then you throw your lever the other way and it would press upon the other drum. The year the Mahoney machine shown in Defendants' Exhibit 5 excavated the ditch near Gorham, Illinois, to the best of my knowledge was 1913. The time of the year the machine was operating there was about the middle of August or

around the first of September, to the best of my recollection. It took me about three weeks' working time to finish that ditch near Gorham with the Mahoney machine. As near as I can recollect the name of the party who had the contract for excavating the ditch that the Mahoney machine dug was a man by the name of Spiker. Before the Mahoney machine was brought to Gorham, Illinois, I was working on the dredge boat that was used on the big ditches. When the Mahoney machine came to Gorham I was taken off the dredge boat and put to operating the Mahoney machine. The ditch that the Mahoney machine excavated at Gorham was somewhere around a half a mile. The ditch at the mouth at the top of the ground was nine feet wide. The ditch at the bottom near the mouth was five feet wide. The ditch was six foot deep at the mouth. At the head of the ditch at the top it was carried nine foot wide all the way through. It was also five feet wide at the bottom of the ditch at the head. The upper end or head of the ditch was four feet deep.

The Mahoney machine shown in Defendants' Exhibit 5 had cutter teeth on both sides of the dipper. The purpose of having these side teeth was for sloping the ditch, and banks, you know. I indicate the location of the cutters or side teeth on the photograph Defendants' Exhibit 5 with the letter "X". The purpose of the other member marked "X" at the rear of the dipper was another knife or lug or whatever you call it, for trimming banks. This Mahoney machine did good work on this ditching job near Gorham, Illinois. The size of the dipper that was used on this machine at Gorham, Illinois, was a half yard. As to speed of operation we could throw forty yards an hour with this machine. I do not know what became of the machine after I completed the ditch. I never saw it any more after I got done. Besides myself I know that Walter Mahoney came and operated the machine shown in Defendants' Exhibit 5 at Gorham, a little while, while I was gone. But I practically excavated all of the ditch with this machine.

Cross Examination by Mr. Edgerton.

The dredge boat that I referred to in my previous testimony, was located west of Sand Ridge, north of Gorham. It came right down between Sand Ridge and Gorham. It was not operating in a river, it was operated in the land, coming from the lakes on down and emptied

in the Big Muddy River. This was a county improvement project. It was formed into a drainage district. I was on the dredging boat and went immediately upon the Mahoney excavating machine. I couldn't give you the names of any of the fellows that worked on the dredge boat now. The reason why—they all go under different names. They all had nicknames, just like I got. After I completed the work on the Mahoney ditching machine I went back to this dredge boat. The length of time it took to finish the dredge boat enterprise I couldn't say because I was called off before I finished the job. I got a message to come and run an American Ditcher this side of Vincennes. I was on the dredge boat a week I guess when I got the message. I took the job of running the American Ditcher. I can't think who my employer was on this job—well the American Ditcher Co. I suppose, it's been so long. Then my memory is not as good as it used to be. I was on this American Ditcher job until we finished the work. I think it was two months after I got there—about two months. On this American Ditcher job I was shoveling back the loose dirt from the track, they dumped it there from cars. This American Ditcher job was located about fifteen miles, twenty miles I guess, this side of Vincennes. It was on this side of the river about fifteen miles through an oil field. There was a big oil field all through there, and they were putting in a railroad through there. I have never been there before or since. I was paid for the work by the company I was working for—I can't recall the name.

Cross examination closed.

Deposition closed.

THOMAS G. DUNN, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Thomas G. Dunn. I am forty-three years old. I reside at Gorham, Illinois, and have lived there since 1905. I have been a civil engineer for about twenty-one years. At the present time I am county superintendent of highways. I have seen the machine shown in Defendants' Exhibit No. 5 working close to Gorham. It was digging a ditch. It was a small ditch.

I guess it would average four feet in depth and about a six foot bottom. It was a drainage ditch. The name of the party that owned this machine was Mahoney. I saw this machine in actual operation on this ditch. The dipper of this machine dug towards the machine. The ditch that this Mahoney machine worked on was not an isolated ditching job, but it was part of a drainage system. The name of the drainage system of which this ditch was a part, was called Big Lake Special Drainage District. I have been the district engineer for this district since 1911.

Mr. Mahoney: I hereby offer in evidence a certified copy of the minutes of the Commissioners of Big Lake Special Drainage District, Jackson County, Illinois, and the Notary is requested to mark the same "Defendants' Exhibit 18, certified copy of minutes of the Commissioners of the Big Lake Special Drainage District, Jackson County, Illinois."

(Narrative continued.) Referring to Defendants' Exhibit 18 the map appended thereto shows the drainage system of the Big Lake Special Drainage District. I am the Thomas G. Dunn whose name appears on this map as district engineer. The map from which the photograph Defendants' Exhibit No. 18 was made was prepared under my supervision. The date on this map is August 30, 1910. In my previous testimony I stated I was district engineer for the Big Lake Special Drainage District since 1911. According to this map I must have been mistaken in my previous testimony, because the map shows that I have been district engineer for this Drainage District since August, 1910. The photograph shown in Defendants' Exhibit No. 18 has been greatly reduced in the photographic process from the size of the original map. On the original map each of the large squares represents one mile, that is one square mile. I can locate on this map Defendants' Exhibit 18 the ditch which the Mahoney machine shown in Defendants' Exhibit 5 excavated. The location of this ditch I have indicated by a line between two green crosses on the map. The name of the ditch which I have just marked which the Mahoney machine excavated is called "Extension of Tributary number Three of Eastern branch."

Referring to Defendants' Exhibit No. 18 particularly that paper dated October 22, 1913, shows that I in-

spected the ditch, and made an estimate due the contractor from the District, and certified the same for payment. The paper dated October 22, 1913, in Exhibit No. 18 referred to Extension of Tributary number Three of Eastern branch. This paper shows that on October 22, 1913, about forty-five percent of that ditch was completed on that date. The paper shows that thirteen stations were completed on this particular ditch. A station is about one hundred lineal feet. I have indicated on the photographic copy of the map appended to Defendants' Exhibit 18 with the letter "A" where station zero was located. Station zero which I have marked with the letter "A" is at a point where the lateral ditch emptied into the main ditch. The Mahoney machine began the excavation of this Extension of Tributary number Three of Eastern branch at station zero. I don't remember of any teams being used to start the ditch. The soil at the place where this ditch was excavated was very tight and sticky soil, what is commonly called gumbo. It is about the worst soil there is to excavate. The Mahoney machine handled it very well. The Mahoney machine completed the lateral ditch which I have marked on the photographic copy of the map, Defendants' Exhibit 18.

I remember the name of one of the men that operated the Mahoney machine on this particular ditch. His name was Pat DeRemo. I believe I remember the names of the commissioners who had charge of the Big Lake Special Drainage District when this work was being done, they were H. L. Brickey, Henry Arbeiter, Sr., and I believe my father was a commissioner at that time, Joel Dunn, I am not positive of that. I remember that in this ditch that the Mahoney machine excavated at Gorham there were in all twenty-seven stations. The Big Lake Special Drainage District was a large job. J. S. Spiker had the contract for this work referred to in Defendants' Exhibit No. 18.

The big ditches in this drainage system were excavated with dredge boats. Referring to the map in Defendants' Exhibit 18 it shows the names of farms along which the ditch ran that the Mahoney machine excavated. These were the Henry Arbeiter and F. B. Madden farms, it also touched the farm of P. J. Moschenrose.

It is stipulated that copies of the documents and certificates, included in Defendants' Exhibit No. 18, may be substituted for the certified copy in the record of one of the defendants herein and may be used with the same force and effect as the original certified copy could have been used.

It is noted that in the uncertified copy, above provided for, on the second page following the map, the date has been changed in ink to 1913 to agree with the original certified copy.

No cross examination.

Deposition closed.

(Certificate of Notary is omitted.)

Mr. Mahoney: We offer in evidence depositions of William Bradshaw, Joseph Moschenrose, C. Crain, Henry Stone, Joseph T. Glenn, George Stone, George DeRemo and Thomas G. Dunn.

Mr. Mahoney: Now, we have one more deposition about Mahoney, and that is by his attorney, that took out his patent.

The Court: His patent attorney?

Mr. Mahoney: Yes.

DEPOSITION FOR THE DEFENDANTS

Taken at Washington, D. C.

NOTICE OF TAKING TESTIMONY.

MR. PHILIP E. SIGGERS,
918 F Street, N. W.,
Washington, D. C.

MESSRS. RICHEY & WATTS,
1090 Union Trust Building,
Cleveland, Ohio.

Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of Eugene W. Johnson, of 9th & F Streets, N. W., Washington, D. C., who resides more than one hundred miles from the place of trial herein, for use on behalf of the defendant at the final hearing of this cause, before Paul J. Robertson, a Notary Public in and for the District of Columbia, who is not of Counsel nor inter-

ested in this cause, at the office of Paul J. Robertson, Union Trust Building, Washington, D. C., on the 22nd day of November, 1929, at ten o'clock, A. M., and thereafter from day to day as the taking of the deposition may be adjourned; and such testimony will be so taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross-examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated at Columbus, Ohio, November 18, 1929.

Service of a copy of the above Notice is hereby acknowledged, this 19th day of November, 1929.

RICHEY & WATTS.

PRINTER'S NOTE:—

A like Notice was issued in behalf of The General Excavator Company and was signed by Mr. Edward L. Reed.

The following deposition was taken on behalf of both defendants, pursuant to the above notice, at the office of Paul J. Robertson, a notary public, Union Trust Building, Washington, D. C., commencing at ten o'clock a. m., Friday, November 22, 1929. Counsel for all parties being present.

EUGENE W. JOHNSON, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Eugene W. Johnson. I am seventy-three years of age. I reside at 2033 H Street, N. W., Washington, D. C. I am a patent attorney. I have been a patent attorney for over half a century. All of that time I have been engaged in the patent practice in Washington, D. C., except about four years when I had an office in Baltimore. For part of the above period I had entire charge of the patent practice of George E. Lemon and remained with him until his death, and I purchased

his patent practice and equipment for a nominal consideration from his executors. Mr. Lemon maintained an office in Washington, D. C., and I had charge of his patent practice in Washington.

I think I continued the business in Baltimore for about four years and accepted an offer made by Captain George E. Lemon to take charge of his patent practice and, except for my first experience with the firm of Chipman, Hosmer & Company and upon the dissolution of that company started in business for myself with an office and was associated with the firm of Hylum & Kane, maintaining an office with them and an office in Baltimore, where I then resided. At the present time I maintain my office in the Atlas Building, corner of Ninth and F Streets, in Washington, D. C.

I am the patent attorney Eugene W. Johnson whose name appears on the drawings of Daniel H. Mahoney patent 1,194,204, dated August 8, 1916. That is my signature as patent attorney on the drawings. I prepared and filed the application on which said Mahoney patent 1,194,204 was issued. I was Daniel H. Mahoney's attorney in this case from the time the application was filed until United States Letters Patent 1,194,204 was issued. I believe I personally prepared this application for patent. The paper which has just been handed to me is a file wrapper such as I used in applications for patent at that time. This file wrapper is obviously the one that was used in the Mahoney case which was submitted to him, January 17, 1913, and Serial Number 7348 corresponds with patent 1,194,204. This was the file wrapper that was used by me to contain papers relating to Mahoney patent 1,194,204 dated August 8, 1916. This is the original file in this particular case. The written entries appearing on the back of this file as well as on the interior of the left hand flap are in my own handwriting. These entries were made at different times. They were obviously made at the time of or contemporaneously with the events to which they relate. They were made by me in the regular course of business.

I found this file among papers of a similar nature which I stored in the basement of my home, 2033 H Street, Washington, D. C., when I gave up an office in the Warder Building and went to 918 F Street. At that period I stripped my files in patent cases of the major portion of their contents. To the best of my recollection, the Official letter of March 31, 1916, paper No. 10,

was the sole content of the file wrapper when I found the file in response to an inquiry by Mr. Hoffman. I did not make a search for other records relating to this Mahoney patent No. 1,194,204, because the file referred to would have contained all the correspondence which led up to the making of the file, except probably a small file in cases where fees were for a preliminary or initial examination. Referring to the back of this file wrapper of Mahoney patent 1,194,204 the notation "App'n submitted Jan. 17th, 1913" on the face of the file is obviously the date that the application was submitted to the applicant, either personally or by mail. I suppose the application was in complete form at that time. Referring to the face of the file the word "Tracings" after "Sketches" refers to a delineation made probably on tracing paper or tracing linen; and "Photo" in the same line indicates that the inventor submitted a photograph of some kind of his invention; and the word "Model" with "none" after it indicates that no model was submitted to me. The abbreviation of "received" after the word "Photo" indicates that the applicant inventor left a photograph with me. The tracings and the photograph which the file indicates that I received from the inventor in this case, were probably put in the file of waste papers and destroyed, the patent having been issued. These papers were destroyed at the time I stated that I moved my office. To my best recollection someone inquired about the Mahoney case, which was long after the files were stripped of their contents. That is somebody besides Mr. Hoffman. Mr. Hoffman's inquiry about the files in this case was made after the file had been stripped of its contents, long after that, and as previously stated these files of patented cases were stripped and removed to the basement of my residence long before any request was made upon me to search for this file.

On the inside of the file appears in pencil that I received five dollars on April the 14th, 1912, for a preliminary examination, indicated by the abbreviation "Pre. Ex."; that on April the 26th, 1912, I received $25 from Mr. Mahoney; and that on January 24th of the same year I received $25 indicated by abbreviation "Govt & Dwgs"; that on March 19th, 1915, there was a charge for drawings of $6.00. Further notations indicate that on April the 12th, 1916, I received $20.00 sent as final Government fee, but that such fee was applied as attorney's fee. This last $20.00 appears to me as appertaining to

another case of Mr. Mahoney's or for other services rendered in another matter in no wise relating to the case upon which patent 1,194,204 was issued. The pencil notation "Due $5.00 for assignment" may or may not have related to the patent issued August the 8th, 1916. The line under the date "March 19, 1915" indicates the above explanation to me. I do not know the reason why Mr. Mahoney delayed filing his application between the date I submitted the application to him on January 17, 1913, and the time the application was filed on September 10, 1915, except my impression was that he was financially embarrassed.

Referring to the first notation on the interior of the left hand flap reading "Recd. 5.00 Apr. 14, 1912-Pre Ex.", this indicates that I received $5.00 for making a preliminary examination of the invention. Consequently I must have had data from Mr. Mahoney which would disclose his invention to me. My name as witness to the official specification in application Serial No. 7348 indicates that Mr. Mahoney was at my office at the time the papers were prepared and executed. The file wrapper as it now appears is with the exception of the absence of papers and sketches which I said were taken out and destroyed in the same condition as it was at the time that I prosecuted said application for patent, to the best of my knowledge and belief, as all data written thereon is in my handwriting.

Mr. Mahoney: The original file wrapper and office letter previously identified by the witness as being the original file which contained his papers with reference to the Mahoney patent 1,194,204 during the filing and prosecution of this case to a patent and having thereon written and printed records of the witness relating to said patent 1,194,204, is hereby offered in evidence and the notary is requested to mark the same "Defendants' Exhibit No. 19. Attorney Eugene W. Johnson's original file wrapper and office letter of Mahoney application 7348 which issued as United States Letters Patent 1,194,204, August 8, 1916."

Mr. Reed: It is stipulated by counsel that the original file wrapper and office letter of Defendants' Exhibit No. 19 may be filed in the record of one of the above entitled causes and that photostat copies of the file wrapper and the office letter contained therein may be filed

in the record of the other of said cases and shall have the same force and effect as the originals would have had if filed in said other case.

CROSS EXAMINATION by Mr. Edgerton.

Q. Referring to Defendants' Exhibit No. 3, is the Eugene W. Johnson at the bottom of the drawing a copy of your autograph? A. Yes.

Q. And did you write the "D. H. Mahoney"? A. I did.

Q. Referring now to Defendants' Exhibit No. 19, the Daniel H. Mahoney file wrapper, did you write the name "Daniel H. Mahoney" on this? A. I did, as well as all the other writings on the file.

Q. Now compare the "M" in "Mahoney" in Exhibit No. 3 with the "M" in the line reading "Assignments Mahoney Railroad Ditching Machine Co." on Defendants' Exhibit No. 19, and also with the letter "M" in the same exhibit appearing on the second line after "Inventor." Are you in the habit of forming the character capital "M" in various manners? A. The different styles of penmanship depend a great deal on the character of pen points and pen holder which I used, often varying not only with the pen but the inclination of the desk from a flat top to an inclined top and though the formation of letters may be different, I would call attention to "ah" in "Mahoney" and "ah" in the same word after the printed word "Assignments."

Q. You are sure that some clerk or other individual in your office did not make some of the entries on this file wrapper? A. I am sure that all the entries were made by myself.

Q. Did you prosecute other applications for Mr. Daniel H. Mahoney? A. I did.

Q. Now, as a practical matter, this file wrapper would be made out or filled in during the early negotiations with your client, would it not? A. The writing approaching Spencerian was evidently written at a different time from the other portions of the file.

Q. And that date, January 17, 1913, appearing after "Application submitted," would be placed on the jacket before the serial number "7348," would it not? A. The serial number undoubtedly was placed on the file after the application was filed, because the serial number is furnished or taken from the official receipt of filing issued by the Patent Office.

Q. And the memorandum on the inside of the jacket which relates to the preliminary examination, fee, and so forth, would be placed in the file jacket before the serial number? A. The inside notations it has been my custom to make prior to entry on my cash book, which for that period is now non-existent.

Q. Then how do you know that the entry of April the 14th, 1912, and the entry of January 17th, 1913, relate to application serial number 7348? A. Because it has been my custom to keep files of each separate application distinct from others.

Q. Have you the file jackets in the other Daniel H. Mahoney cases you prosecuted?

Mr. Mahoney: Objected to as immaterial and irrelevant.

A. I have not looked up the matter of the other file jacket, of patent number 1,057,162, issued March the 25th, 1913; and I have no recollection of prosecuting for Mr. Mahoney other than the two cases.

(Narrative continued.) As to the nature of the information sent Mr. Mahoney with regard to the search of April 14, 1912, generally speaking, I would not have filed the case if my preliminary examination had not disclosed to me that the invention submitted contained patentable subject matter, and that the prospect for securing a patent was favorable. As to Mr. Mahoney's disclosure to me, the file appears to indicate on its face that the disclosure was in the nature of a tracing, drawing and a photograph. The photograph would have been received, very likely, in 1912, according to my records. When I sent the application to Mr. Mahoney on January 17, 1913, a copy of a drawing was probably submitted with the application as I have been accustomed to do in every case; and at that date the copy would have been a blue print taken from the drawings prepared prior to writing the specifications. From the witness' name I would say that the drawing was made by Clarence Walker or his brother J. T. Walker. I do not know whether J. T. Walker is living now, but the other Walker, the first witness, is now employed at the United States Navy Yard. I suppose he made the drawings from the tracing or photograph forwarded to me about April 14, 1912, as he did most of my drafting at that period, but the figures on the drawing I recognize as having been made by myself. I do not think I could recognize a photograph that

was submitted to me at that time unless it was marked in my handwriting. I cannot positively identify Defendants' Exhibit No. 4 as having been submitted to me. This photograph appears to be familiar. I have a faint recollection of asking Mr. Mahoney what was the meaning or purpose of a connection between the vehicle and the dredging machine and the answer was that it was a hose to supply water to the boiler. This I connect up with the statement made in the first column near the bottom of the type of engine and boiler used on the machine. I also have a faint recollection that one of the two figures of a man,—Mr. Mahoney stated that he was one of them, but this recollection is quite faint and I would not have thought of it except upon presentation of the exhibit above mentioned.

Q. Mr. Mahoney has testified that this is one of the first photographs made of this type of machine. Is it not probable that your draftsman and you too developed your patent application with a copy of this photograph before you?

Mr. Reed: The witness has stated that he can not definitely identify this photograph and has only a faint recollection thereof.

Further, to the best of counsel's recollection, the witness Mahoney did not state that this was one of the first photographs made of this type of machine, and the question is therefore objected to, as calling for speculation.

Mr. Mahoney: Mr. Reed's objection is concurred in by me.

A. This is highly probable, as the inventor was present when the case was prepared and there was a tracing which, with the photograph, would enable any draftsman to make the side view forming the drawings for the patent. Owing to the fact that the drawings do not show a link as shown on a member connected with the scoop, nor does the scoop show a bail in the drawings at the rear or closed end of the scoop, I would surmise that the tracing was followed rather than the photograph.

Q. When did you receive the tracing? A. The tracing or photograph or some equivalent disclosure must have been received about April the 14th, 1912, in accord with my file.

Q. To the best of your recollection, did this tracing illustrate the members 47 and 48 pivoted to the bucket

as illustrated in the Patent Office drawing? A. My recollection fails me as to this point.

Q. Did I understand you to state that Mr. Mahoney was with you when this application was signed in its final form? A. He must have been because I witnessed the specification and it was also witnessed by Mr. Blackwood. If it had been otherwise, the application would have been returned to Mr. Mahoney.

Q. Was the application signed here in Washington? A. I would say yes, on account of the witnesses to Mr. Mahoney's signature.

Q. Who is Mr. Blackwood? A. I believe Mr. Blackwood was a notary public.

Q. Does he live here or did he at the time of the execution of this application? A. The witness Blackwood evidently was in Washington at the time of the execution of the application.

Q. Do you remember whether or not you made any drawing corrections or changed your specification after you submitted the application to Mr. Mahoney on January the 17th, 1913? A. I do not believe that there were any changes made in the application prior to the execution.

Q. Was Mr. Mahoney in Washington when you submitted the application to him on January the 17th, 1913? A. He must have been, but I would refer to—(question read) I do not recollect of any changes having been made between the date it was submitted to Mr. Mahoney and the date of filing of the application, because the file indicates that in August and November, 1915, information was called for, the nature of which I do not now call to mind.

Q. I do not believe you have answered my question, XQ. 67 (XQ. 67 read by Notary). A. To the best of my knowledge and recollection he was.

Q. Referring now to the notation "Information written for Aug 26 1915 Nov 5 1915", do you recall the nature of the requests made at that time? A. It would appear to be that this was relating to the references cited by the Office during the prosecution of the case.

Q. You have testified that the drawings were prepared by your patent draftsman when you submitted the application to Mr. Mahoney on January the 17th, 1913; but on the inner fold of the file jacket you entered your charge for the same on March the 19th, 1915. Will you please explain the delay? A. The entry of March the

19th, 1915, was the sum received for the preparation of the drawings, as Mr. Mahoney had paid me fifty dollars and a preliminary examination fee, and Mr. Mahoney was in poor circumstances financially and I did not urge him for a balance until a later date. This reply is predicated upon my usual practice of receiving a certain amount in advance before taking up the preparation of a case; but it looks like in this case that the fifty dollars included the fifteen dollars as first Government fee.

Q. You have testified that it was your practice to segregate all the papers relating to each particular case and to maintain separate file wrappers for the same. You have also testified that the notation "received $20 sent as final fee" does not pertain to this case. Did you make an exception to your rule in handling Mahoney's applications? A. As to fees in the Mahoney case, I consider the Mahoney case an exception, as Mr. Mahoney probably came to me through another attorney, now secretary of the Society for the Prevention of Cruelty to Animals, who issued a circular with very close low fees. To the best of my recollection I have only had this case and another one heretofore mentioned from Mr. Mahoney. The notation "April 12th 1916 Recd $20.00 sent as final but applied as Attys" covered charges for several amendments in the case and it is followed by a remark "Due 5.00 for assignment". Whether I insisted on this or eventually applied it as final Government fee I do not recollect and at the present time have no way of ascertaining data relating to such entry.

Q. In your answer to Q. 35, you stated "This last $20 appears to me as appertaining to another case of Mr. Mahoney's or for other services rendered in another matter in no wise relating to the case upon which patent 1,194,204 was issued." Do you still maintain that answer? A. The answer was made to the best of my knowledge and recollection and it is not my usual practice to apply money in one case to another, nor do I recollect the particular services rendered. Why the entry was made I do not know.

Q. Do you still feel that this entry pertains to this case? A. I do.

Mr. Edgerton: Cross examination closed.

Mr. Mahoney: No re-direct examination.

Deposition closed.

(Certificate of Notary omitted.)

Mr. Mahoney: We offer in evidence the deposition of Eugene W. Johnson and Defendants' Exhibit 19 which was offered in evidence during the taking of said deposition.

Mr. Mahoney: Coming to the public use here in Toledo now, Your Honor, this is the case of the old Vulcan Iron Works here in Toledo that manufactured steam shovels.

The Court: This is the Vulcan that sold out to the Bucyrus?

Mr. Mahoney: Yes.

DEPOSITIONS FOR THE DEFENDANTS

Taken at Toledo, Ohio.

NOTICE OF TAKING TESTIMONY.

MR. PHILIP E. SIGGERS,
918 F Street, N. W.,
Washington, D. C.

MESSRS. RICHEY & WATTS,
1090 Union Trust Building,
Cleveland, Ohio.

Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of John B. Webber, who is approximately seventy years of age, and who resides at 6343 Edgewater Drive, Toledo, Ohio, and of Walter S. Culver, who is approximately sixty-five years of age, and who resides at 546 East Broadway, Toledo, Ohio, both of whom are ancient and infirm, for use on behalf of the defendant at the final hearing of this cause, before John C. Budd, a notary public in and for the County of Lucas, Ohio, who is not of counsel nor interested in this cause, at the office of said John C. Budd, room 503 Produce Exchange Building, Toledo, Ohio, on the 23rd day of January, 1930, at ten o'clock A. M. and thereafter from day to day as the taking of the depositions may be adjourned; and such testimony will be so taken in accordance with the provisions of Sections 863, 864 and 865 of the Re-

vised Statutes of the United States, and the Federal Equity Rules. You are invited to attend and cross-examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated at Columbus, Ohio, this 18th day of January, 1930.

Service of a copy of the above notice is hereby acknowledged this 20th day of January, 1930.

RICHEY & WATTS,
Attorneys for Plaintiff.

PRINTER'S NOTE:

A like Notice was issued on behalf of The General Excavator Company and was signed by Mr. Edward L. Reed.

The following depositions were taken on behalf of both defendants, pursuant to the above notice, at the office of John C. Budd, a notary public, Room 503, Produce Exchange Building, Toledo, Ohio, commencing at ten o'clock a.m., Thursday, January 23, 1930. Counsel for all parties being present.

JOHN B. WEBBER, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is John B. Webber. I live at 6343 Edgewater Drive, Toledo, Ohio. I am retired. I will be seventy years old the fifteenth day of this coming September. My occupation prior to retirement was general superintendent of the Vulcan Iron Works, Toledo, Ohio. I worked for the Vulcan Iron Works Company forty years. I began to work for them on the 13th day of June, 1873. The Vulcan Iron Works Company were engaged in general repair business and manufactured steam shovels and dredges. The Vulcan Iron Works is no longer in existence, they were sold to the Bucyrus Steam Shovel Company on the 1st of March, 1910. I was general superintendent of this company at the time of the sale. After the Vulcan Iron Works Company was sold to the Bucyrus people I stayed with them three

years after that, until about 1913. They moved their plant from Toledo, and I wouldn't go with them. I have operated steam shovels and was familiar with the operation of them for about thirty years. The Vulcan Iron Works Company were in business about three years before I went to work for them. My first position was as an apprentice. I was traveling engineer, that is, I operated machines for the company at various places where they had been sold to contractors. It was the custom to operate machines for contractors who had purchased them from ten to thirty days. I have operated machines for the Vulcan Iron Works Company, in Duluth, Pittsburgh, Chicago, St. Louis,—different places in the United States where machines were sold. The Vulcan Iron Works Company was a large manufacturer of steam shovels. At the time the company was sold in 1910 Alexander Backus was the president, he has since died.

The printed copy of United States Letters Patent 557,350, issued March 31, 1896, is one that was issued to me as the inventor. I assigned my rights in this invention to the Vulcan Iron Works Company.

Mr. Mahoney: The printed copy of United States Letters Patent 557,350, issued March 31, 1896, is hereby offered in evidence as Defendants' Exhibit No. 20, and the notary is requested to mark the same, "Printed copy of United States Letters Patent No. 557,350, issued March 31, 1896, to John B. Webber."

(Narrative continued.) The steam shovel shown in Webber patent 557,350 of March 31, 1896, was manufactured by the Vulcan Iron Works Company, about the fall of 1895. The drawing which has been handed me bearing date of May 13, 1895, shows a back action shovel manufactured by the Vulcan Iron Works and made in accordance with Webber patent 557,350 Defendants' Exhibit No. 20. The notation on the lower right hand corner of this drawing reads "Side elevation of back action excavator. Vulcan Iron Works Company, Toledo, Ohio, May 13, 1895, D. C. Walters." The D. C. Walters whose name is shown on this drawing is now dead.

Mr. Mahoney: The drawing just identified by the witness as a drawing of the back action excavator manufactured by The Vulcan Iron Works, Toledo, Ohio, in accordance with the Webber patent,

Defendants' Exhibit 20, is hereby offered in evidence as Defendants' Exhibit 21, and the notary is requested to mark the same, "Drawing of Vulcan Iron Works Company's 'back-action' excavator, dated May 13, 1895."

Mr. Edgerton: Defendants' Exhibit No. 21 is objected to as secondary evidence.

(Narrative continued.) The back action excavator shown in Defendants' Exhibits 20 and 21 were sold by the Vulcan Iron Works Company. The first back action shovel like that shown in Defendants' Exhibits 20 and 21 was sold to the T. A. Gillespie Company at Pittsburgh. They are now in New York. This company used this shovel at Allegheny, Pennsylvania. As to the date of sale of this shovel to the T. A. Gillespie Company, Mr. Gillespie came to Toledo and wanted to know if we could build a machine for him to do that work in Allegheny. It was in the fall of the year, and it was tested out in March, and it was taken to Allegheny, I think the first part of June, 1895. I know of my own knowledge that T. A. Gillespie used this machine as a back action shovel on the Allegheny job, because I operated the machine at that point for this company. My operation of the machine continued for ten days. After I left there the machine was operated by Walter Culver. This Allegheny job lasted two or three years. The excavation there was being made through clay and loose rock. It was a trench for water works. The Vulcan Iron Works back action machine finished that job at Allegheny for Gillespie. There were no other machines on that job. The ditch dug by this back action shovel at Allegheny was seven feet wide and twelve feet deep. The machine operated satisfactorily on this job. As to the length of that water works job at Allegheny, I have heard them say it was twelve to fifteen miles in length.

After this Allegheny job was finished the T. A. Gillespie Company used this machine on other jobs. Mr. Culver and Mr. Ike Pheatt ran this machine for Gillespie on these other jobs. I had some further connection with this machine after this Allegheny job. Mr. Gillespie bought a hundred thousand dollars worth of steam shovels, and asked us to take the back action shovel, and put a standard crane on it, and ship it on to the Messina Canal in New York. The Messina Canal was a canal for an electric light plant to take water out of the St.

Lawrence River and clay and rock were excavated there. I think the Messina Canal was excavated along about 1906 or 1907. It was at this time that we changed the Vulcan back action shovel to a forward digging shovel for Gillespie.

The reason the back action shovel was changed to a forward digging shovel on the Messina Canal job was so that it could do surface work. That is, excavate any objects above the level. In surface work the machine is down in a cut digging the side of a hill or bank of some kind. A back action shovel is primarily designed to dig below the surface. The Messina Canal job was surface work, but not all because it was partly done with dredges. The greater portion of the work, however, was for the type of shovel that dug forwardly. There were five machines of the type shown in Webber patent Defendants' Exhibit No. 20 manufactured and sold by the Vulcan Iron Works Company.

One of these machines went to St. Louis; one to Farley & Green of Chicago; one went to Pullman, Illinois; I don't remember where the other one went. As to the company that bought the shovel in St. Louis, they were brothers but I have forgotten the name. I operated the back action shovel shown in Defendants' Exhibits 20 and 21 at St. Louis. This was in 1898, at the time they had the cyclone. I was there when the cyclone occurred. They were making a sewer. I did not stay till the job was completed but only remained there ten days to demonstrate the shovel. After that period it was turned over to the contractor. They had their own runner. I operated the back action shovel at Chicago also, for Farley & Green. That shovel was also accepted by the contractor. The photograph just handed me shows a tractor shovel on wheels, shows a crane of the back action shovel. This photograph shows the back action shovel manufactured and sold by the Vulcan Iron Works about which I have been testifying. The photograph also shows that this machine was made in accordance with Webber patent 557,350 Defendants' Exhibit 20. This photograph is a true and correct representation of the Vulcan back action shovel that was sold by the Vulcan Iron Works to T. A. Gillespie and the one that was sold to the St. Louis contractor, and to Farley and Green of Chicago, and to the other concern at Pullman, Illinois, whose name I do not remember. My remembrance is that this photograph was taken at Allegheny. You

have called my attention to the name appearing on this machine which appears to be Farley & Green. It is possible that it is the one that was purchased by Farley & Green of Chicago. It is almost impossible to tell the machines apart except by their number. My recollection is that the photograph was taken at Allegheny. This is an original photograph which has been in my possession up until a few weeks ago.

Mr. Mahoney: The photograph which has just been identified by the witness as a true and correct representation of the back action shovel shown in Webber patent 557,350, Defendants' Exhibit 20, and manufactured by the Vulcan Iron Works Company at Toledo, Ohio, is hereby offered in evidence as Defendants' Exhibit No. 22, and the notary is requested to mark the same, "Photograph of the Vulcan back action shovel made in accordance with the Webber patent, No. 557,350."

(Narrative continued.) Page 97 of the Railway Review, issued September 7, 1895, which has been handed me shows in the large illustration in the center of the page a back action steam shovel. This photograph shows the back action shovel manufactured by the Vulcan Iron Works Company of Toledo, in accordance with Webber patent 557,350 Defendants' Exhibit 20. I have referred to the article on page 497 in connection with the illustration thereon which is entitled "A new steam shovel that will dig ditches" and from my knowledge of the machine manufactured by the Vulcan Iron Works Company I know that the description of the machine in this article is correct.

Mr. Mahoney: Page 497 of the Railway Review Dated Sept. 7, 1895, is hereby offered in evidence, as Defendants' Exhibit No. 23, and the notary is requested to mark the same, "Page 497 of the Railway Review, issued Sept. 7, 1895, bearing an illustration and description of the Vulcan back action shovel manufactured in accordance with the Webber patent No. 557,350."

(Narrative continued.) Referring to Defendants' Exhibit 20 the manner in which this Vulcan back action shovel operated may be described as follows. It takes two men to operate the shovel, an engineer and a cranesman. The engineer has control of the shovel, lowering, hoisting and swinging. The cranesman has control of

loading the dipper, lowering the dipper in the pit. The engineer swings over at right angles and dumps the load in a wagon or car. The engineer swings the shovel back to the center, and lowers the dipper. The cranesman that has control of lowering the dipper stick to the depth he wants and holds it and the engineer hoists it up, swinging it at right angles and dumping the load. You don't have to move this shovel out of the center of the cut to dig the trench wider. You can dig a trench ten feet wide from five to eighteen foot deep. In making a cut wider, in the center of the boom we have a spread there of about ten feet, which enables the cranesman to pull the hoisting pad lock from one side of the boom to the other. The cranesman has a 5 by 6 engine that controls the shipper shaft and a pad lock to dig either right or left to make it wider. In swinging the boom, to the right, he pulls the pad lock to the right and in pulling that pad lock there is a chain fastened to the shipper shaft and he pulls the shipper shaft to about 45 degrees, and that permits the shovel to dig away from the center to make it wider. The dipper stick is made V shaped in cross section, and that is lowered down by a spool and a chain handled by the cranesman with a foot belt brake. This shovel would dig anywhere from the width of the shovel to twenty feet from the center of the cut if you wanted it, or more. That would be ten feet on each side.

This shovel was not limited in digging to the width of the bucket without moving the machine. In addition to the engineer and cranesman we also had a fireman on this machine. The crane on this machine could be swung to either side of the ditch in unloading about twenty-five or thirty feet. The chain fastened on the dipper handle was fastened at the bottom, and at the top. It is also fastened to a spool, right and left, to raise and lower the dipper. When the engineer wished to lower the dipper, the cranesman holds the friction brake; the engineer lets go of the hoisting chain 62, and that lowers the dipper down, wherever the cranesman wants to dig. The dipper stick was manipulated to unloading position by the engineer who swung the bucket to the corner and it was dumped with a trip line by the cranesman. Defendants' Exhibit 22 shows the bucket in dumping position, it is open. This back acting shovel was capable of unloading the spoil to either side of the ditch into wagons or cars. I have unloaded it that way into wagons or cars.

The Court: Was this patent involved in the Cleveland case? (Referring to U. S. Letters Patent No. 557,350.)

Mr. Corbett: No.

Mr. Richey: We don't agree with that.

The Court: Your position is that it was?

Mr. Richey: There was a patent to Webber that shows this description. There may be a few bolts different, or something of that kind, made by the Marion Company.

Mr. Corbett: No, the Marion Company never made this shovel.

The Court: What is your position now, Mr. Corbett?

Mr. Corbett: Well now, Mr. Richey seems in some way to confuse the Webber machine or the Webber patent with some device made by the Marion Company. Now, there was no evidence in the Cleveland suit at all about this public use of this Webber device.

Mr. Richey: Well, let's settle it by going to the record. Your Honor, the record, pages 112 and 113 in the Byers case, and the Webber patent is shown in the record.

The Court: Well, what is shown at that point?

Mr. Richey: That is the testimony of Mr. Shaefer, of the Byers Company, about the use of this Marion machine.

Mr. Reed: It has no connection with the Marion machine whatever.

Mr. Richey: Here is the Webber patent; it shows the stationary boom out there, you see.

Mr. Mahoney: We will offer evidence about the machine later.

Mr. Richey: This is the dipper stick, that run up and down, and then in and out. Now, here is the same thing; perhaps this has a hood on.

Mr. Corbett: That is a different machine.

The Court: Well, you say the Webber machine was in the Cleveland case as the Marion machine?

Mr. Richey: Yes, and the testimony at pages 112 and 113 in the record, a man named Shaefer testified to that.

Mr. Corbett: That is not the same machine.

The Court: Well, of course I can't say it is. I just want your views, is all. I cannot resolve that now.

Then the correctness of his contention depends on whether or not the Marion machine and the Webber machine are identical or substantially the same?

Mr. Corbett: Yes, sir.

(Mr. Mahoney continues reading direct examination to close.)

(Narrative continued.) The Vulcan Iron Works manufactured in addition to these back action shovels, all types, from ten to one hundred and fifty tons. This back action shovel was designed so that it could be changed to a forward digging machine if required by replacing it with a standard crane. This Vulcan back action shovel was not a stock machine and the reason it was not a stock machine is because there was no demand for them. In other words we only manufactured this type of machine on special orders where the contractors had work of that kind that this machine would do.

In digging, this machine always stood on solid ground, and the dipper pulled toward the machine.

Cross Examination by Mr. Edgerton.

The machine that was sold to Gillespie was converted into a standard crane.

Q. And the job at Allegheny was the only trenching job done by this machine, is that correct? A. As far as my recollection goes. I don't know where the machine is now.

Q. To the best of your recollection or knowledge, it was not operated as a back action ditcher after the Allegheny job? A. I don't know.

Q. To change the crane required moving the machine to the shop or factory? A. No, sir; it is a standard machine. The booms are interchangeable.

Q. The machine that went to St. Louis, what is your recollection of the dimensions of the excavation made with that machine? A. 8 foot wide and 14 to 16 foot deep.

Q. And do you know anything about the work done by the machine that was sent to Chicago? A. Yes.

Q. Will you state, please, the type of excavating done there. A. That was loose rock and clay. That was at 142nd street.

Q. Was this surface work or ditching? A. Ditching,—sewer.

Q. Will you please state the dimensions of this ditch? A. That run from six to twelve feet. Six feet wide and 12 feet deep.

Q. How wide was the bucket in these various machines? A. About 36 and 38 and 40 inches.

Q. To the best of your knowledge, were any of these machines ever used to cut a ditch which was substantially the width of the bucket? By that, I mean a ditch in which the side cutting appliance was not employed? A. Yes.

Q. Was the bucket provided with side rake teeth? A. No.

Q. How far beyond the vertical position could the stick be extended outwardly? A. That depends upon the depth of the sewer. For instance, you want to dig down ten feet below that; whatever you dig you got to lengthen out your dipper stick.

Q. Could the bucket ever be extended forwardly of the center line drawn through the pivotal point? A. Yes.

Q. How? A. By the engineer giving them plenty slack of the hoisting chain.

Q. If I understand you correctly, it would only assume a position beyond the center line of the pivotal point when swung into that position. A. Swing back on an angle there of seven feet, beyond the center line of the dipper stick pivot.

Q. Could the engineer hold it in this position? A. No. The cranesman dropped the shovel and held it wherever he wanted it.

Q. Then if I understand you rightly, the engineer would swing the bucket but the cranesman would have to lock the stick in the outward position before taking a cutting stroke? A. You would have to get to the digging point before she would stop. The engineer would have to let go of his hoisting chain, and the cranesman dropped the bucket wherever he wants it.

Q. And the cranesman and engineer had to work together to accomplish this result? A. Always.

Q. Could the engineer and cranesman manipulate the bucket to effect a striking blow with the cutting teeth of the bucket? A. Yes.

Q. How? A. By holding them together. You can lower it down so you can put your finger under it, if you want to. Done by the lowering of the cranesman with the brake.

Q. What would be the length of the stroke or hoeing fall of the stick while delivering a striking blow? A. I don't get you at all. You mean striking the bottom?

Q. No. With the cutting teeth of the bucket? A. I don't get you.

Q. Didn't you say you could deliver a striking blow with the cutting teeth of the bucket? A. Yes, the cranesman can. By letting go of his brake. But if he did, he is apt to knock that dipper all out of line, break it up. The dipper is not made for a steam hammer or a pile driver.

Q. Then it was not your practice to do that? A. No, sir.

Q. And you never saw it done? A. I have seen it done, but not intentionally.

Q. Did any damage result? A. Yes. Broke the teeth and sprung a mouth piece.

Q. I presume you mean the bucket. A. No, the mouth piece is riveted onto the bucket, and the teeth are riveted onto the bucket and mouth piece.

Q. Did any other injury result? A. You are apt to knock out the teeth out of your racking, break your shipper shaft, and liable to break the crank shaft on the engine; those dippers, some of them, weigh as high as five ton. You drop five ton six or eight feet, it is liable to break any machine.

Q. You used the term "racking". What did you mean by this expression? A. That is where the engine and shipper shaft runs up and down on pinions connected to an engine on a different type of shovel. This handles with a chain.

Q. Apart from the racking, the other injuries enumerated however would follow in the machine, Exhibits 20, 21, 22, and 23? A. There is a general wear and tear to all machines.

Q. Was the boom in Exhibit 22 fixed as to height? A. Yes, sir.

Q. And is not pivotally mounted for swinging movement vertically? A. No, sir. It is stationary.

Q. In building up a deposit pile of spoil, at the edges of the trench, what would be the total height to which such pile of spoil could be built? A. We always used to load in wagons and make our back fill. You could dump up there ten feet; build ten feet high on the surface.

Q. But not any more than that? A. That depends upon the height of the boom. Ten feet is safe.

Q. That is, ten feet without reconstructing the boom height? A. It may do more, I don't know just exactly; it would be safe at ten feet.

Q. How long were the machines used which were sold in Chicago, Allegheny and St. Louis, and so forth? A. The Pittsburgh machine was in use, that is, the Allegheny, for eight years, up until I lost track of it.

(Narrative continued.) As to the other machines we sent repairs to them; that is all we know. As to whether any of these machines are in existence now I could not say, I have no record of them for twenty years. There were nine lines required to operate the machine. That includes the dumping line. The engineer manipulated three of these lines, and the cranesman operated the other six. These machines were capable of digging shale and loose rock.

Q. Do you mean by loose rock by being able to pick the rock as you would with a mattock and break it? A. No, not break it; loose rock. No shovel can dig solid rock.

Q. How about shale? A. It would dig shale.

Q. Did it? A. Yes, sure.

Q. Where? A. Dig shale up in Duluth; all different parts of the country we ran into shale rock. Loose rock, what is loose in the earth. Or loose rock that has been blasted.

Q. In other words, it would scoop up the loose rock? A. Yes, sir.

Q. But the scoop was not used for hoeing or breaking the rock up? A. It was not built for it.

RE-DIRECT EXAMINATION by Mr. Mahoney.

Q. In your answer to XQ. 155, you stated 9 lines were necessary to operate the machine. That included lines and cables for every purpose, is that correct? A. Yes, sir.

Q. How many lines were used in loading alone? A. There are not lines; they are chains. One line is a dump line. You use loading and digging on a corner; you use all chains. In fact, use all chains in digging the center. There would be three chains to operate the dipper when she is digging in the center. The others are stationary.

Q. Point out the three chains necessary for digging in the center. A. The hoisting chain and swinging

chain. The hoisting chain is 62 in the drawing. Also, the dipper stick chain.

Q. The dipper stick chain operates automatically without any action on the part of the engineer except to pull in on the hoisting chain, is that correct? A. The cranesman handles that chain, the dipper stick and the chain with the brake.

Q. But only to place the bucket in position for digging, is that correct? A. Yes, sir.

Q. When the bucket is in position for the cut, the hoisting chain is the only one which is needed to be operated to fill the bucket by pulling in thereon? Is that correct?

Mr. Edgerton: Objected to as leading.

A. No, sir. The radius of that bucket going down and dig all the earth out, it can't. The cranesman must regulate in digging with his brake in order to fill the dipper.

Q. After the cranesman has positioned his bucket for the proper cut, through manipulation of the brake, what line is then used for filling the bucket? A. The hoisting line.

Q. Then the crane is swung to one side and the bucket dumped by pulling on the dumping line? A. Yes, sir.

Q. In enumerating the lines to operate this machine which you have stated were nine for all purposes, did you consider the lines shown in the plan view on Fig. 2 of the patent, Defendants' Exhibit 20, to control the angle of the dipper handle as four lines? A. Yes, sir.

Q. The line on the swing circle was considered as one line? A. As two lines.

Q. And the other three lines were the hoisting line, the dump line and the line on the dipper handle? A. Yes, sir.

RE-CROSS EXAMINATION by Mr. Edgerton.

Referring to Defendants' Exhibit 21 the dipper stick was moved longitudinally with respect to the boom in lowering by the hoisting chain and the cranesman lets go of his brake, drops the dipper down. The engineer hoists the dipper and pushes the dipper stick back to where the cranesman wants to start to load the dipper. It is lowered by gravity, elevated by the hoisting line,

and positioned by the cranesman when he sets his brakes on the brake wheel.

Deposition closed.

(At this point the deposition session was adjourned until ten o'clock January 24, 1930.)

(The trial was here adjourned until Tuesday morning, March 10, 1931, at nine thirty a.m.)

(Tuesday, March 10, 1931, nine thirty a.m. trial was resumed, and Mr. Mahoney continued reading depositions of defendants.)

(Deposition session resumed January 24, 1930, at ten o'clock a.m.)

WALTER S. CULVER, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Walter S. Culver. I reside at 546 East Broadway, Toledo, Ohio. I am seventy years of age. My present occupation is electric repairman. I was at one time employed by the Vulcan Iron Works of Toledo, Ohio. I worked for this company about fifty years. In that period I have worked for other companies, but not permanently. Sometimes I was loaned out by the Vulcan Iron Works Company to operate shovels. The Vulcan Iron Works Company was formed before my time. This company was engaged in steam shovel and dredge repair and manufacture. That company is not in existence now. They sold out to the Bucyrus Steam Shovel and Dredge Company, a year or two before the war or two years. When I was employed by the Vulcan Iron Works Company, I was a steam shovel engineer most of the time, that is, I operated steam shovels and dredges. I started to operate steam shovels the year President Garfield was assassinated. I have operated various types of steam shovels, Bay City, Bucyrus and Vulcan. I operated these machines on regular contract jobs in different parts of the country.

I have seen a machine like that shown in the printed copy of United States Letters Patent 557,350, issued March 31, 1896, Defendants' Exhibit No. 20. I worked on this machine while they were building it at the Vulcan Iron Works. I am acquainted with John B. Webber the inventor of that machine. He was superintendent of

the Vulcan Iron Works when this machine was constructed. I operated the machine shown in Defendants' Exhibit 20. I first operated this machine in Allegheny, Pennsylvania, for the Allegheny Water Works. To operate this machine, this dipper is pulled from the center five feet each way. The arm goes back here at the same angle she is now. When they pull up that dipper it is back here, and when you get that all cleaned out from there, you are ready to move back then eight feet. Those engines pull that five feet out of the center, you hoist your dipper up with a load of dirt; it is pulled back to center, swung over and dumped. The dipper dug to the machine. The machine always stood on solid ground. This machine was known as a back action shovel. The manner in which the dipper was lowered to a position to fill is as follows. This chain 62 goes back here to a drum, the engineer cuts it loose with his lever, and the weight of it swings it where you want it, and you could check it and then start to hoist it. The fall of the dipper stick was checked by two chains fastened to the drum. The chain was fastened to the dipper stick at both ends and wound around the drum. The cranesman checked the fall of the dipper by two friction belts and a foot lever. The friction belt was around the wheels at the end of the boom. After the dipper was in position to cut, it was loaded by pulling it up through the bank by the hoisting chain. The cranesman with the check belt would hold it or ease it as required until it was filled. It was dumped with a dump lever or door cut loose. That is a rope or chain was used for dumping. This machine could unload to either side of the trench into wagons or cars. I have dumped it over the bank or throwed it over, and I have unloaded into wagons or cars on the jobs that I worked on.

I operated this back action excavator at Allegheny, Pennsylvania, for the T. A. Gillespie Company. This was a water works trench. On the average this trench was about eight feet and a half or nine feet wide. In depth it would average about ten feet. I think this water works trench at Allegheny was about nine miles long. I worked on this job at Allegheny with this back action shovel, nine months. I believe I would average twelve hours a day on this job. I don't remember the year I operated this back action shovel at Allegheny. It was about 1895 or 1896. There was no other machine on the job to dig trenches. This back action shovel finished the job at Allegheny.

The drawing Defendants' Exhibit No. 21 shows a machine manufactured by the Vulcan Iron Works Company which was operated by me for the T. A. Gillespie Company at Allegheny, Pennsylvania, around the years 1895 or 1896. The photograph Defendants' Exhibit No. 22 is a true and correct representation of the type of back action machine that was operated by me for the T. A. Gillespie Company at Allegheny. Page 497 of the Railway Review dated September 7, 1895, also shows the machine I operated for the T. A. Gillespie Company at Allegheny, Pennsylvania, in the years 1895 or 1896.

After I completed the Allegheny job for the T. A. Gillespie Company, I next operated this back action shovel for this company at Passiac, New Jersey. I operated this back action shovel at Passiac, New Jersey, about four months. This was a water works job. It was about eight feet wide and seven foot six inches deep on an average. This machine was operated as a back action shovel on this job.

The next place that I operated this machine for the T. A. Gillespie Company was at Ponton Plains, New Jersey. It was operated as a back action shovel on this job, which was a water works job. I operated the machine on this job for about five months. The trench on this job was about eight feet wide, and seven feet five inches deep.

The next place I operated this machine for the T. A. Gillespie Company was at Minneapolis, Minnesota. The machine was used as a back action shovel on this Minneapolis job. This job lasted about seven months. There was seven miles of trench which averaged about eleven feet deep and about the same width. This was a water works trench. After the Minneapolis job was completed I never operated this machine any more as a back action shovel. The machine was overhauled after this job and made into a front action shovel. When it was made into a front action shovel I operated it on the Messina Canal, Messina, New York. This machine could not be used as a back action shovel on this job because it was not the kind of work for it. This was a power canal and required front action shovels. This was a large excavation, with machines in the cut. It was a large canal. There were seven machines working on this job at one time. When the shovels cut the bank down to the water's edge, dredges started in at the St. Lawrence River and finished it.

I have operated back action shovels like that shown in Defendants' Exhibits 20 to 23 for other companies besides the T. A. Gillespie Company. These shovels were manufactured by the Vulcan Iron Works. One of these shovels I operated for Anderson Brothers at St. Louis. This was a storm sewer. I worked for this company four months at St. Louis. I did not complete the job there. After I left the shovel was ran by one of the contractor's own men. I operated this shovel for Anderson Brothers at St. Louis about three years after I finished the Gillespie job about 1899 or 1900. This job at St. Louis was nineteen feet deep and twelve feet wide. This machine was operated as a back action shovel on this job.

Cross Examination by Mr. Edgerton.

I know that the Vulcan Iron Works Company built three machines like Defendants' Exhibit 20. I don't know whether Anderson Brothers ever converted their machine into a forward digging machine. As to the third machine mentioned by me, I do not know whether it was ever converted into a front action digging machine. I do not know where these machines are now. You could build a spoil pile adjacent the edges of the ditch according to the depth.

Q. Referring to Defendants' Exhibit 21, I call your attention to the dimension eight feet and 9 inches from the grade line to a point at the bottom of the boom. Would it be possible to build a pile of spoil higher than this dimension? A. Not without they would level it off.

Q. Is it not true that the end of the boom would brush off the top of the pile if the spoil were deposited to a height exceeding 8 feet, 9 inches? A. No.

Q. Does not the end of the boom swing out over the spoil when the boom is moved to a dumping position? A. Yes, sir.

Q. Now, do you still feel that the end of the boom would not sweep over the top of the spoil in a pile and limit the height to 8 feet, nine inches? A. Natural slope to that both ways, the pile of dirt; that would be about two and one.

Q. I am referring only to the height of the pile from the ground line to the end of the boom. A. It would dump about nine feet in the clear.

Q. The vertical height of the boom was fixed, was it not? A. Probably was, but I couldn't say what it was.

Q. You mean you don't know what the height was? A. Yes, that is it, you got it now.

Q. Was it possible to vary the height from the ground to the end of the boom? A. Could it be moved up and down? No, it is stationary.

Q. Did you ever dig a ditch which was no wider than the width of the bucket? A. No, sir.

Q. In operating the scoop, the cranesman and engineer would have to work in unison to position the bucket, would they not? A. Yes, sir.

Deposition closed.

(Certificate of Notary omitted.)

Mr. Mahoney: We offer in evidence the depositions of John B. Webber and Walter S. Culver, as well as Defendants' Exhibits 20, 21, 22 and 23 offered in evidence during the taking of said depositions.

DEPOSITION FOR THE DEFENDANTS

Taken at Marion, Ohio.

NOTICE OF TAKING TESTIMONY.

Mr. Philip E. Siggers,
918 F Street, N. W.,
Washington, D. C.

Messrs. Richey & Watts,
1090 Union Trust Building,
Cleveland, Ohio.

Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of William Mitchell, who is sixty-six years of age, and who resides at 244 Madison Avenue, Marion, Ohio, and who is ancient and infirm, for use on behalf of the defendant at the final hearing of this cause, before Henry A. Mickley, a Notary Public in and for the County of Marion, Ohio, who is not of counsel nor interested in this cause, at Room 201, 133 East Center Street, Marion, Ohio, on the 21st day of May, 1930, at seven-thirty o'clock P. M., and thereafter from day to day as the taking of the deposition may be adjourned; and such testimony will be so taken in accordance with the provisions

of Sections 863, 864 and 865 of the Revised Statutes of the United States, and the Federal Equity Rules.

You are invited to attend and cross-examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated at Columbus, Ohio, this 17th day of May, 1930.

Service of a copy of the foregoing notice is hereby acknowledged this 19th day of May, 1930.

RICHEY & WATTS,
Attorneys for Plaintiff.

PRINTER'S NOTE:

A like Notice was issued on behalf of The General Excavator Company and was signed by Mr. Edward L. Reed.

The following deposition was taken on behalf of both defendants, pursuant to the above notice, at the office of Henry A. Mickley, a notary public, Room 201, 133 East Center Street, Marion, Ohio, commencing at seven-thirty o'clock p.m., May 21, 1930. Counsel for all parties being present.

WILLIAM MITCHELL, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is William Mitchell. I reside at 244 Madison Avenue, Marion, Ohio. I am sixty-six years old. At the present time my occupation is running a dredge boat for the Marion Sand and Gravel Company. I am the operator of the dredge. I have had experience with the operation of steam shovels, dredges and other excavating machinery better than twenty-five years. That is, I have operated machines for twenty-five years for excavating and dredging. In that time, I have operated drag lines, and dipper dredges, and a dipper shovel, and a clam shell. They were caterpillars and mounted on wagons, and dredges that float. I operated the drag line in southeast Missouri, and the floaters most every place in the United States. I worked pretty well over twenty-

eight states. I was employed by the Fairbanks Steam Shovel Company at Marion, Ohio, for twenty-five years. I began employment there around 1900, and worked for them up until the year 1925 or somewhere around there. While I was employed by the Fairbanks Steam Shovel Company, I was outside man on repair work until he started building shovels. I worked about three years before he commenced, then I was erecting them on the job wherever they were sold. My duties required me to stay with the machine and demonstrate it for ten days, unless it was a special job. In that ten day period I had to operate the shovel on the job. The acceptance of the machine was dependent upon the manner in which the machine operated in that ten day period, and the machine was sold with the understanding they would do so much work in the ten days, and a man had to do it to get the settlement. If the machine met the conditions of the contract at the end of ten days the purchaser was required to accept the machine, unless it was a special machine.

The printed copy of United States Letters Patent 1,056,268, dated March 18, 1913, is like a machine I saw built with the exception of one or two places, that is different than what it shows on that print. I saw this machine in the yards of the Fairbanks shop at Marion, Ohio. These machines were built by the Fairbanks Steam Shovel Co. I had charge of setting them up in the yard. I have seen two machines like that shown in the drawing. The purpose of erecting them in the yard was to be sure to have them right before they went out on the job. They were tested in construction and operation before they were shipped to the purchaser. These machines that I tested run all right, what we could try them here in the yard. One of these machines was shipped to Minnesota, and one to San Benito, Texas. I can't give the man's name off-hand to whom the Minnesota machine was sold and shipped. The machine that was sold and shipped to Texas was for the San Benito Land and Water Company.

Mr. Mahoney: The printed copy of United States Letters Patent 1,056,268, dated March 18, 1913, and issued to James G. Fairbanks, is hereby offered in evidence, and the Notary is requested to mark the same "Defendant's Exhibit No. 29, printed copy of United States Letters Patent 1,056,268, dated March 18, 1913."

(Narrative continued.) After I tested these machines, and they were shipped from the factory at Marion, I had to go and set them up and run them the time that is required by the contract. I demonstrated the machine like that shown in Defendants' Exhibit 29 that was sent to Texas. I did not demonstrate the machine that was sent to Minnesota. I can not recall the name of the demonstrator that was sent to Minnesota with the machine. The Marion Steam Shovel Catalog to which I have been referred copyrighted in 1912, shows on page 46 thereof the machine that was shipped to Texas, with the exception of this little cab here.

Mr. Richey: That patent was in the Cleveland case, Your Honor.

Mr. Corbett: Your Honor, I understand in connection with that that the structure which was used differed somewhat from the structure of the patent in the Cleveland case, and that is the purpose of this deposition, to show the difference in the operation of those devices.

Mr. Richey: Well, Mr. Sauer testified about this.

Mr. Corbett: Yes, but Sauer didn't know anything about the actual operation.

Mr. Richey: I think, Your Honor, when you get to it it is a matter of cumulation, is all.

(Mr. Mahoney continues reading the deposition.)

(Narrative continued.) The illustration on page 46 shows the type of machine that was built in accordance with Fairbanks patent 1,056,268 except that it shows a little something below there underneath the machine. It is the same with the exception of some minor changes. The machine shown in the illustration is the one which was built by the Fairbanks Steam Shovel Company and tested out by me in their yard and later shipped to Minnesota. The other machine that was shipped to Texas was like the machine shown in illustration on page 46 of the Fairbanks catalog.

Q. I now hand you a blue print bearing the number 315 in the lower right hand corner, and ask you what it shows if you know? A. It shows the machine just as she was built.

Q. That is the machine shown in Defendants' Exhibit No. 29, and the Fairbanks Catalog of 1912, page 46, is that correct? A. Yes, sir.

Mr. Mahoney: The Fairbanks Steam Shovel Company Catalog copyrighted 1912, and bearing the

illustration of the machine shown in Defendant's Exhibit No. 30, on page 46 thereof is hereby offered in evidence, and the notary is requested to mark the same "Defendant's Exhibit No. 30. The Fairbanks Steam Shovel Catalog copyrighted in the year 1912." The blue print of The Fairbanks Steam Shovel Company No. 315, just identfied by the witness as showing the machine built in accordance with the Fairbanks patent 1,056,268 is hereby offered in evidence, and the Notary is requested to mark the same, "Defendant's Exhibit No. 31, Blue Print No. 315, of Fairbanks Steam Shovel Company's back action shovel."

Mr. Edgerton: Defendant's Exhibit 30, is objected to as insufficiently proven. Defendants' Exhibit 31, is doubly objected to, First: because it is insufficiently proven, and, Second: As secondary evidence.

(Narrative continued.) Referring to Defendants' Exhibit No. 30, particularly the illustration on page 46, and comparing it with the machine illustrated in the drawing Defendants' Exhibit 29, the differences I note so far as the boom and scoop mechanism is concerned, this seventeen is located different here in the building than it shows there on the plan, and thirteen doesn't show this sheave as plain as it does here. That eleven is for the boom that is hitched further down on the boom than what he shows there. (Indicating the patent.) The movable boom is hinged different in the machine that was built than it is in the patent drawing. With the changes I have pointed out, the machine shown in the illustration on page 46 of the catalog is the same as that shown in the patent drawing Defendants' Exhibit No. 29. These changes constituted principally the modification of the dipper cradle. Referring to Defendants' Exhibit 29, Defendants' Exhibit No. 30, page 46, and Defendants' Exhibit No. 31, in operating the machine you simply drop your dipper number 14 down in front, and draw in your hoist line 22 for to fill; when you swing around to dump then you change to 23 to dump; that is all there is to getting the bucket loaded and unloaded. In digging, the bucket is moved to the machine. The machine always remained on solid ground and dug to itself. The Figure 7 on the drawing of Defendants' Exhibit 29, would be the stationary boom. The numeral 11 indicates the lower boom which raises and lowers.

The numeral 16 on Figure 1 of Defendants' Exhibit 29 indicates the false bottom, which might also be called the gate. The gate 16 operates in this way. When you pulled to fill your bucket it shoves to the back of the dipper bucket, and when you dump that forces the dirt out of the bucket and pulls to the front. The purpose of chains 17 and 18 is to pull the bottom when it is fetching the dirt out, and when your bucket is empty you could pull on line 23 and raise your boom and dipper right on up. 17 holds it at a certain place and you can raise it right on up.

These back action shovels which were built and shipped to Minnesota and Texas were gasoline machines, with Fairbanks-Morse engines. I erected and demonstrated the machine shown in Defendants' Exhibit 30, page 46, which I testified was shipped to Texas, in the year 1910. This machine was used at San Benito, Texas, for digging an irrigating canal. I operated this machine at San Benito, Texas, for six weeks. The contract required me to excavate seven hundred yards a day. I couldn't say whether the machine met this requirement, that is, how much it measured up, but we got settlement for the machine. The machine satisfied the purchaser and was accepted. As to the depth of this irrigating canal at San Benito, Texas, they were digging so as to try to carry three feet of water above the surface, they were digging the center out and building a levee on each side so as to carry three feet of water above the surface. On the average, this irrigating canal ran pretty close to four feet below the surface of the ground. This irrigating canal was about eleven feet wide at the surface, and was about seven feet deep on a line from the top of one dirt pile to the other and thence to the bottom of the canal. The canal was about twenty-six feet wide measured from the top of one dirt pile to the other. To operate this machine, it required two men. Only one man was required to operate the controls of this machine. The other man was a roustabout about the machine and had nothing to do with the controls. In other words, it only took one man to operate the machine for digging and unloading, that is operating the controls.

Q. Does Blue Print No. 315, Defendants' Exhibit No. 31, show any feature that was not actually used on the machine shown in Defendants' Exhibit 30, page 46?

Mr. Edgerton: Objected to as leading.

A. No.

Q. Referring to Defendants' Exhibit No. 31, was the part which I am marking with the letter "A" actually on the machines which were built and shipped to Texas and Minnesota?

Mr. Edgerton: Same objection.

A. No. It wasn't.

Q. In all other respects however the blue print, Defendants' Exhibit No. 31, shows the exact structures of the machines which were built and shipped to Texas and Minnesota, is that correct? A. Yes, sir.

The Court: What is that, the stop?

Mr. Mahoney: The A is a brake, and it was testified in the previous suit that was on that machine, and this man testified it was not.

(Mr. Mahoney continues reading deposition.)

Referring to Defendants' Exhibits 30 and 31 the power plant or bed of the machine was used for other types of shovels, such as front action shovels and other types manufactured by the Fairbanks Steam Shovel Company, and was not designed specifically for this back action shovel alone. The boom mechanism could be changed to a front action if desired. In the year 1910 the Fairbanks Steam Shovel Company chiefly manufactured and sold those machines and floating dredge boats. Floating dredge boats were the main bulk of their business. In the year 1910 they didn't have any demand to speak of for back action shovels like those shown in Defendants' Exhibit 31. Those two were all they sold. Dredging and irrigating work at that time was chiefly done with floaters. By floaters I mean floating dredges. The machine shown in Defendants' Exhibits 30 and 31 could dig a trench about eighteen feet wide. You could dump into a truck just as well as you could any other one. The machine was capable of excavating a trench the width of the bucket only. If you were digging a trench the width of the bucket only you would provide for side clearance by putting a blade or tooth on the side, just the same as all of them do. In the operation of the machine shown in Defendants' Exhibit 30, the machine was moved on its caterpillars just when you wanted to move it up. Friction clutches were used on this machine.

Q. I now hand you what purports to be a Fairbanks Steam Shovel Company Shop Order No. 185, bearing

date of January 27th, 1910, and ask you to inspect this shop order and state if you know what this order referred to? A. That is the order for the machine that went to Texas.

Mr. Mahoney: The shop order No. 185, dated January 27th, 1910, which has just been identified by the witness, as the shop order for the machine shipped to The Rio Grande Construction Company, at San Benito, Texas, is hereby offered in evidence, and the Notary is requested to mark the same, "Defendants' Exhibit No. 32, Fairbanks Steam Shovel Company Shop Order No. 185, dated January 27, 1910."

Mr. Edgerton: The exhibit is objected to as being insufficiently proven, and moreover as it does not identify the machine the witness has been testifying about.

Q. How are you able to tell from Shop Order No. 185, Defendants' Exhibit No. 32, that it was the machine shown in Defendants' Exhibits Nos. 30 and 31? A. I get that from the material shipped, one special 1½ dry land excavator. Oil engine power, 50 H. P. single cylinder type, Boom 40 ft. Machinery to be mounted on endless webb tracks and self-propelling. Oil engine electric plant, F. M. & Co. type with generator filled rheostat, voltmeter, six large and twelve small lamps. Wrenches, oil can, and tools necessary in operation of machine.

Q. And from your familiarity with the business of this concern, and from the description of the material shown on this shop order as well as the name used to designate the machine, you know that this shop order related to the machine which you actually shipped and later demonstrated in Texas? A. Yes, sir.

Q. In your answer to Question 31, you stated that the machine was sold to the San Benito Land and Water Company, whereas the order shows the machine was to be shipped to the Rio Grande Construction Company, can you explain this discrepancy in the names? A. The Rio Grande Construction Company, the San Benito Land and Water Company, The Hidalgo Construction Co., The San Benito Telephone Company, they were all one company, the same men but they had several different companies in one outfit.

Q. But the contract for the sale of the machine was made to the Rio Grande Construction Company as shown on the order, is that right? A. Yes, sir.

Q. I now hand you what purports to be original shop order No. 188, dated March 9th, 1910, of The Fairbanks Steam Shovel Company, and ask you if you know what this shop order relates to? A. That was a one yard machine, that is for the Minnesota machine.

Q. This order then relates to the machine shown in Defendants' Exhibits Nos. 30 and 31, which was tested by you in the yard and later shipped to Minnesota? A. Yes, sir.

Q. To whom does the order show the machine was to be shipped to? A. George A. Castle.

Q. Does the order show the location? A. The county of Polk, Minnesota.

Q. Referring to Defendants' Exhibit No. 30, page 46, to whom does the catalog state that the machine shown in that illustration was owned by? A. George A. Castle, Crookston, Minnesota.

Q. What does the order state as to how the machine is to be constructed?

Mr. Edgerton: Question objected to as the order will speak for itself.

A. One yard dry land machine with one yard dipper, 35 foot boom, single cylinder Fairbanks-Morse Engine of ample power. Gasoline storage tank 200 gallons capacity. Electric light plant for 25 lights. To be constructed so that it will travel ahead of the ditch, excavate toward itself and to move forward under its own power, and to travel on endless webb track.

Mr. Mahoney: Shop order No. 188, dated March 9th, 1910, of The Fairbanks Steam Shovel Company just identified by the witness as being the order for the machine shown on page 46, of Defendant's Exhibit No. 30, is hereby offered in evidence, and the notary is requested to mark the same, "Defendant's Exhibit No. 33, Fairbanks Steam Shovel Company's shop order No. 188, March 9th, 1910, for back action shovel shipped to George A. Castle, Polk County, Minnesota."

Q. Do you recall the date that the Minnesota machine was actually shipped? A. No, I couldn't.

Q. Do you remember the year? A. 1910.

CROSS EXAMINATION by Mr. Edgerton.

The soil which was excavated in the San Benito job was sort of a clay. There was no rocks in it. I do not know what kind of soil was excavated on the Minnesota job, because I wasn't on that job, but ordinarily that work was just good clean clay digging. No rocks in it to speak of. The machine on that job down in Texas worked around a year there to my knowledge. I do not know what became of it after that. I was never down there again, and I never heard of it again. As to the machine in Minnesota, I couldn't say how long it was operated, but there was repairs shipped to both of them for quite a long while so they must have been working. In excavating with this machine you could elevate the boom and let it fall delivering a striking blow with the scoop, but I never did this, I never had occasion to.

Deposition closed.

(Certificate of Notary omitted.)

Mr. Mahoney: We offer in evidence the deposition of William Mitchell and Defendants' Exhibits 29, 30, 31, 32, and 33 which were offered in evidence during the taking of said deposition.

Mr. Richey: Your Honor, I find the same thing was in the Cleveland case. The blue print was Exhibit K there, and the catalog was Exhibit L. It was discussed by Mr. Sauer at pages 106, 137, 138 and 139 of the Byers record. The only difference I can see is perhaps in the horse-shedding of the witness.

Mr. Corbett: Your Honor, I think we have made it clear that there were some changes in that machine, differences in the machine from the one operated; one of them acted with the omission of the brake for the lowering and raising of the boom. That also brings out that the two-line control, which has been bragged about so much by our opponents, was old.

Mr. Mahoney: And Mitchell was the only man that ever operated it. Sauer never saw the machine, I don't think.

Mr. Corbett: He may have seen it, but didn't operate it.

Mr. Richey: He said they had that brake in order to hold it in to the work.

Mr. Corbett: This operator said not.

DEPOSITION FOR THE DEFENDANTS

Taken at Marion, Ohio.

NOTICE OF TAKING TESTIMONY.

MR. PHILIP E. SIGGERS,
918 F Street, N. W.,
Washington, D. C.

MESSRS. RICHEY & WATTS,
1090 Union Trust Building,
Cleveland, Ohio.

Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of Frank H. King, who is approximately sixty-seven (67) years of age, and who resides at 353 South State Street, Marion, Ohio, who is ancient and infirm and who is about to go out of the district in which the above-entitled case is to be tried, and to a greater distance than one hundred (100) miles from the place of trial, before the time of trial, for use on behalf of the defendant at the final hearing of this cause, before Henry A. Mickley, a Notary Public in and for the County of Marion, Ohio, who is not of Counsel nor interested in this cause, at the office of Henry A. Mickley, 129 N. Main Street, Marion, Ohio, on the 28th day of November, 1930, at 10:00 o'clock A.M., and thereafter from day to day as the taking of the deposition may be adjourned; and such testimony will be so taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross-examine.

EDWIN P. CORBETT,
Attorney for Defendant,

Dated at Columbus, Ohio, this 25th day of November, 1930.

Service of a copy of the above notice is hereby acknowledged this 26th day of November, 1930.

RICHEY & WATTS,
Attorneys for Plaintiff.

PRINTER'S NOTE:

A like Notice was issued on behalf of The General Excavator Company and was signed by Mr. Edward L. Reed.

The following deposition was taken on behalf of both defendants, pursuant to the above notice, at the office of Henry A. Mickley, a notary public, 129 N. Main Street, Marion, Ohio, commencing at ten o'clock A. M., November 28, 1930. Counsel for all parties being present.

FRANK H. KING, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Frank H. King. I reside at 353 South State Street, Marion, Ohio. I am retired. I am sixty-eight years of age. I am expecting to go to California in about two weeks. I was employed by the Marion Steam Shovel Company of Marion, Ohio, from the time they were started until they sold out. This would be about forty-three years. I think the company was first organized about 1885. I didn't help to organize it. George H. King, formerly president of the Marion Steam Shovel Company, was my brother. I have been employed in nearly every capacity at the Marion Steam Shovel Company. I worked all through the shop in every capacity, helped erect machines, and operated machines, and later I was traveling salesman, and worked in the engineering department about two years, and I was a traveling salesman forty years ago this next January, and salesmanager from about 1910 until they sold out. I think it was about three years ago next February that they sold out. The company is still in existence, however, but under a different management. At the present time I am not connected with the Marion Steam Shovel Company in any capacity. When I was traveling salesman for the Marion Steam Shovel Company, my territory consisted of all of the United States, Canada and Mexico. As an operator of power shovels I was used as demonstrator for the Marion Steam Shovel Company to operate shovels that had been sold to various purchasers. There was no time limit on the period we were to operate the shovels. We were instructed to stay until we got the money, got a settlement, it is usually about thirty days. During that period we had to actually operate the shovel on the job for the purchaser. The printed copy of United States Letters Patent 579,589, dated March 30, 1897, to George W. King, shows a device that was manufactured

by the Marion Steam Shovel Company. I saw shovels like those shown in the drawings of this patent built and operated. The George W. King patentee of this patent 579,589 was my brother. The Marion Steam Shovel Company sold machines like those shown in patent 579,589 to the Charleston South Carolina Mining and Manufacturing Company. I am not sure of the name, they got two of the back action and two of the standard. This company was located southwest of Charleston, South Carolina, probably twenty-five miles.

I do not recall whether or not any back action shovels like that shown in King patent 579,589 were ever sold to any other companies in that region, but there was one that was sold that went to Bartow, Florida. That is all that I can recall that were sold. I sold these back action shovels about which I have been testifying myself, I know that. These shovels were used in Charleston, South Carolina, and in Bartow, Florida, for digging phosphate. In South Carolina where this phosphate was found, there was about four to six foot of overburden, and I can't recall exactly but there was a thin vein of phosphate not exceeding about two feet. The character of this phosphate is very hard in the nature of cement gravel. I don't know whether you would call it rock or pebble, it had shark teeth and all of that stuff in it, now what would you call that pebble or rock. Under this vein of phosphate formation there was very soft material. You could take a pole and run it down quite a distance right through it. The pole could be pushed down by hand. The manner in which the phosphate was mined with this back action shovel shown in the King patent 579,589 was to strip the overburden off with the standard shovel. You then follow with the back action shovel excavating and loading the phosphate in cars located on the bank. By a standard shovel I mean a forward acting shovel. This forward acting shovel merely stripped off the dirt that was above the phosphate vein or formation. This over-burden was stripped and then dumped where the phosphate rock had already been taken out. The deposits of phosphate in the Charleston, South Carolina, and the Florida regions are commonly known as phosphate rock.

The reason that a forward acting shovel could not be used to take out the phosphate rock in South Carolina and Florida is because a forward acting shovel would not have any foundation to run on as the material it

would have to run on would be too soft to carry it. This is because beneath the phosphate is very soft material as I said, you could run a pole right down in it. Therefore, a forward action shovel could not be supported on this soft material which would be beneath the phosphate rock as the shovel would have to dig forwardly. With the back action shovel, however, this shovel could rest on the hard phosphate formation and dig towards itself. The phosphate formation or rock was sufficiently strong to bear up this heavy shovel even though the material underneath the rock was of a very soft nature. This back action shovel built by the Marion Steam Shovel Company and used in these phosphate fields in South Carolina and Florida weighed approximately sixty tons. As traveling salesman for the Marion Steam Shovel Company, I was required to visit these phosphate fields in South Carolina and Florida a couple of times a year, and I saw these machines in operation on these various occasions that I visited these fields.

Mr. Mahoney: The printed copy of the George W. King patent No. 579,589, dated March 30, 1897, is hereby offered in evidence, and the Notary is requested to mark the same "Defendant's Exhibit No. 53, printed copy of King patent 579,589, dated March 30, 1897."

Mr. Edgerton: The exhibit is objected to as not having been set up in the answer, either as a publication or a prior knowledge and use.

Mr. Mahoney: The Marion Steam Shovel Company public use of the back action shovel in the South Carolina and Florida phosphate fields is set up in The Osgood Company's Answer, and at the proper time notice will be furnished to plaintiff in accordance with the statutory requirements.

(Narrative continued.) My brother George W. King is now dead. The catalog just handed to me is a Marion Steam Shovel Co. catalog and bears a publication date of the year 1900. I think Mr. A. E. Cheney had considerable to do with the preparation of this catalog. Referring to page 55 of the Marion Steam Shovel catalog dated 1900, this page contains a testimonial letter from the Charleston South Carolina and Manufacturing Company from Fetteressa, South Carolina, dated November 27, 1896. On page opposite page 55 of this catalog is shown an illustration of the back action shovel near Bar-

tow, Florida that was made in accordance with the King patent 579,589 about which I have testified. I have actually seen the shovel illustrated on the page opposite page 55 in operation. I took the photograph shown opposite page 55 in this catalog. This photograph shows the back action shovel in actual operation at Bartow, Florida. Referring to the photograph, the operation of this back action shovel is as follows. If you are digging phosphate with a back action shovel, you see this is the phosphate line down here, and this is the overburden here; above letter A is the overburden, below letter A is the phosphate. The Bartow field has a heavier vein than the Charleston field. In this photograph the overburden which is above the line which I have marked with the letter A was stripped off with a traction dredge. It was in the Charleston field that we used the forward action shovel to strip the overburden. In the Charleston field the vein varied in depth to two feet from probably fourteen to fifteen inches.

Q. Will you kindly read the letter from the Charleston Mining and Manufacturing Company into the record as shown on page 55 of this catalog?

Mr. Edgerton: We object to this request as the catalog speaks for itself.

A. Yes, "Charles W. Trotter, President. W. M. Wallace, Supt. Sales and Accounts. C. A. Merriam, Supt. of Works. Charleston, S. C. Mining & Manuf'g Co. Philadelphia Office, No. 328 Chestnut Street, Rooms No. 73-74.

Telegraph Office, Fetteressa, S. C. Nov. 27, 1896.
Fetteressa, S. C.
Marion Steam Shovel Co., Marion, Ohio.

Dear Sirs: Enclosed find photographs of our four steam shovels purchased from your company some three years ago. These machines have been constantly employed in uncovering and loading Phosphate Rock since the date of their purchase and work in pairs as shown in the picture. The ordinary machine works in advance removing the overburden and depositing it on a waste bank; while the rear-acting or rock machine, follows on the same track level and loads the rock on cars on the opposite side of the cut.

We are glad to be able to say that no serious break has occurred to any of the machines during this time,

although some large stumps have been handled when cutting through timber land. This record we consider quite above the average and worthy of mention for the benefit of those contemplating the purchase of this class of machinery.

Yours truly,

CHARLESTON, S. C. M. & M. Co.,
C. A. MERRIAM,
Supt. of Works."

Mr. Richey: We, of course, object to the letter as being hearsay on the part of the man that wrote it.

Mr. Mahoney: It is a publication, Your Honor, and bears a publication date. The same objection was raised at Cleveland, and the Court overruled it.

Mr. Richey: Of course, even as a publication it is a self-serving document of the facts stated there.

The Court: What is the date of this catalog?

Mr. Mahoney: The date of the catalog is 1900, which is long prior to anything conceived here.

(Mr. Mahoney continues reading deposition.)

(Narrative continued.) I am the F. H. King listed as traveling salesman on the title page of this 1900 Marion Steam Shovel catalog. The dipper shown on the page opposite page 55 digs by pulling towards the center of the machine, that is, the digging is done by pulling the dipper to the machine while standing on the phosphate rock. The cars to the right of the machine in the illustration are to receive the phosphate rock after it is excavated. In loading into the dump cars the back action shovel is operated by filling the dipper, pulling towards the center, raising up and swinging over and discharging into the cars.

Q. Do you recall the exact or approximate date that the Marion Steam Shovel Company manufactured and sold the back action shovel shown in the illustration shown opposite page 55, and other machines which were made like that shown in King patent 579,589? A. No, I don't recall the exact date but it was in the early nineties.

Q. By referring to the date of the letter on page 55, would you say that the machines were manufactured and sold by Marion Steam Shovel Company prior to Novem-

ber 27th, 1896? A. I imagine quite awhile before that time.

Q. Do you recall when the Florida phosphate fields were opened up? A. In the early nineties.

Q. Have you any way in which you fix that date when these fields were opened up? A. The Florida phosphate fields and the Iron Range in Minnesota opened up in 1892.

Q. Did the Marion Steam Shovel Company furnish shovels for both of these fields, that is, the Florida phosphate fields and the Iron Range in Minnesota, shortly after they were opened? A. Yes, sir, but there were no back action shovels on the Iron Range.

Q. Was The Marion Steam Shovel Company the first company to furnish shovels for both of these fields, the Iron Range development and the Florida phosphate fields? A. We put the first shovels in the Iron Range, but I can't say about Florida.

Q. How soon after the Florida phosphate field opening was the back action shovel shown on page 55 of the 1900 catalog there sold and used? A. I was down there in 1892 and sold different machines from time to time, just when these were sold I do not know, probably a few years after.

Q. But it was before the year 1896 that these shovels were sold? A. I think so.

Mr. Mahoney: The front cover, the page opposite the title page, bearing the date 1900, the title page, and page 55, and the illustration on the page opposite page 55, of The Marion Steam Shovel catalogue are hereby offered in evidence as Defendant's Exhibit No. 54, and the Notary is requested to mark the same, "Defendant's Exhibit 54, front cover, page opposite the title page bearing the date 1900, the title page, page 55, and the page opposite page 55, bearing the illustration, of Marion Steam Shovel catalogue dated 1900."

(Narrative continued.) The paper just handed me bearing an illustration and some printed matter shows a standard machine and a back action shovel on the Charleston, South Carolina Mining and Manufacturing Company's work. I have indicated on the illustration by the letter "A" the position of the standard shovel. I have indicated by the letter "B" on this illustration the position of the back action shovel. As to who took this photograph, I took most of them, I rather think I

took these. I took the one at Bartow, I know. It would be pretty hard to say but I think I took these. I have actually witnessed the operation of the Marion back action shovels in the Charleston, South Carolina, phosphate fields. The forward acting shovel shown by the letter "A" on this illustration was used for stripping the overburden. The back action shovel designated by the letter "B" was used for digging phosphate rock.

Mr. Mahoney: The sheet bearing the illustration of the Marion back acting shovel in the Charleston, South Carolina, field, is hereby offered in evidence and the Notary is requested to mark the same, "Defendant's Exhibit No. 55, illustration of Marion Steam Shovel Company back action shovel in Charleston, South Carolina, phosphate fields."

Mr. Edgerton: The exhibit 55 is objected to as secondary evidence, and as incompetent and immaterial.

Q. To what extent can a power shovel dig rock?

Mr. Edgerton: The question is objected to as being vague.

A. If it is anything like rock it can't dig it at all. But if it is a soft shale rock you can dig it medium well, depending altogether on the nature of the rock.

Q. Will a steam shovel dig solid lime stone or rock of that hardness I will say? A. It will not.

Q. In excavating when you come to solid rock, what has to be done? A. Use explosives.

Cross Examination by Mr. Edgerton.

Q. Referring to Defendant's Exhibit No. 55, the machine illustrated therein appears to be mounted on railway car wheels, which wheels are supported on a track, the track being laid ties as in railroad construction, is that right? A. Yes, sir.

Q. Do you recall how long that machine was used? A. No, I don't.

Q. Do you know about how long it was? A. About thirty feet.

Q. And how much track was laid for the machine when it was in its operating position, I refer now to machine B? A. The track is cut into about four foot sections, and as the machine is moved these sections were taken up and laid back of the machine as the machine is moved back,

Q. But the machine always rested upon at least thirty feet of track, is that right? A. Approximately thirty feet of track.

Q. And as illustrated, the machine B rested on a track in which the ties were spaced very close together, were they not? A. The ties were placed about two feet apart,

Q. And in reference to the illustration in the catalogue Defendant's Exhibit 54, this machine was also mounted on wheels supported by track with ties, the same as shown in Exhibit 55? A. Yes, sir.

Q. Again referring to the illustration in Exhibit 54, is the material in front of the machine and immediately in front of the bucket phosphate or phosphate rock? A. Phosphate rock.

Q. And in Exhibit 55, is the material in the foregrounds of the illustration and under the bucket phosphate rock? A. Phosphate rock.

Q. Have you ever operated one of these machines in this phosphate rock? A. No, sir.

Deposition closed.

Mr. Richey: While this King patent was not in the Cleveland case, this catalog was there as Exhibit F and testimony there regarding it.

Mr. Mahoney: The patent also specified, Your Honor, that the purpose of the patent was for a rock digging machine; it specifies that as one of the purposes, and that was not in suit and clearly in this suit, a different patent.

Mr. Corbett: Your Honor, there are two King patents, and I would like to have you particularly note that this patent was not in the Cleveland suit, and it refers to digging rock in the specification.

Mr. Richey: A patent cannot prove it can dig rock by merely saying so. It is all cumulative of what was in before. There they said it dug this rock.

DEPOSITION FOR THE DEFENDANT
Taken at Akron, Ohio.

NOTICE OF TAKING TESTIMONY.

MR. PHILIP E. SIGGERS,
918 F Street, N. W., Washington, D. C.

MESSRS. RICHEY & WATTS,
1090 Union Trust Building, Cleveland, Ohio.
Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of George E. Wagner, 870 Bloomfield Avenue, Akron, Ohio, who resides more than one hundred miles from the place of trial herein, for use on behalf of the defendant at the final hearing of this cause, before Mary McGowan, a Notary Public in and for the County of Summit, Ohio, who is not of counsel nor interested in this cause, at the office of Mary McGowan, Room 215, Ohio Building, Akron, Ohio, on the sixteenth day of September, 1930, at ten o'clock a. m., and thereafter from day to day as the taking of the deposition may be adjourned; and such testimony will be taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross-examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated at Columbus, Ohio, this 12th day of September, 1930.

Service of a copy of the above notice of taking testimony is hereby acknowledged this 15th day of September, 1930.

RICHEY & WATTS,
Attorneys for Plaintiff.

PRINTER'S NOTE:

A like Notice was issued on behalf of The General Excavator Company and was signed by Mr. Edward L. Reed.

The following deposition was taken on behalf of both defendants, pursuant to the above notice, at the office of Mary McGowan, a notary public, Room 215, Ohio Building, Akron, Ohio, commencing at ten o'clock a. m., September 16, 1930. Counsel for all parties being present.

GEORGE E. WAGNER, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is George E. Wagner. I reside at 870 Bloomfield Avenue, Akron, Ohio. I am forty-eight years of age. I am at present employed by the Star Drilling Machine Co. of Akron. The nature of my duties is sales work, designing engineering, and general supervision of shovel business. This company manufactures power shovels, and my designing work relates to this phase of the business.

I was formerly employed by the Keystone Driller Co. I began my employment with them about 1903, and I continued in their employment until 1926. My position with them just prior to the time I left their employ was chief draftsman. I left their employ voluntarily. I am testifying under subpoena in these cases. While I was employed by the Keystone Driller Company, I had charge of general design and drafting relating to power excavators manufactured and sold by that company. I have seen machines like that shown in Defendant's Exhibit 24. The manufacturer of that machine was the Keystone Driller Company. I did designing and drafting work on the machine illustrated in Figure 1 of Defendant's Exhibit 24. I am acquainted with LeRoy P. Clutter patentee of the machine shown in Defendant's Exhibit 24. The machine shown in Defendant's Exhibit 24 having the attachments shown in Figure 1 was called a ditcher. The Keystone Driller Company actually made and sold an excavating machine with the particular type of ditcher scoop assembly as shown in Figure 1 of Defendant's Exhibit 24. Referring to Defendant's Exhibit 24 Figure 1 the name of the part to which a lead line has been drawn from the letter "A" is called a boom extension plate. The name of the part indicated by the numerals 19 in Figure 1 of Defendant's Exhibit 24 I think is called a beam connection bar. In the machines actually manufactured and sold by the Keystone Driller

Company there were parts corresponding to the parts marked 19 and to the parts which I have indicated by the letter "A" on Figure 1 of Defendant's Exhibit 24. The parts marked 19 were originally made on the Keystone Driller Company machine of the same shape and contour as that shown on the drawings Figure 1 of Defendant's Exhibit 24, but were later changed. The first machine had straight connecting bars like that shown in Figure 1 of Defendant's Exhibit 24 and these machines were manufactured and sold by the Keystone Driller Company. The reason that bars 19 were changed was because in actual field practice an interference developed between the bar 19 and the one marked with the letter "A".

I am marking with the letter "B" the point on the part "A" that the connecting bar 19 contacted with, or interfered with. This interference of the part 19 with the boom extension plate "A" affected the inward movement of the ditcher stick 1 towards the boom and acted as a stop.

Q. Did this interference of part 19 with the boom extension plate "A" limit the angular approach of the ditcher stick to said connecting member 19?

Mr. Edgerton: The question objected to as leading.

A. Yes.

Q. Were complaints received by the Keystone Driller Company from machine owners of this interference between the connecting bars 19 and the end of the boom?

Mr. Edgerton: The question is objected to, the witness has not been qualified as occupying a position to have contact with the machine owners.

A. Yes.

(Narrative continued.) These complaints were referred to me for action. In order to eliminate this interference I had the bar made in bent form instead of straight. In other words the bars were permanently bent or curved at the factory to avoid this interference.

Q. I now hand you a tracing taken from Clutter patent 1,317,431 dated September 30, 1930, which is Defendant's Exhibit 24, and ask you to state whether or not this tracing which has been twice enlarged and modified by the elimination of some of the parts not here concerned, shows substantially the manner in which the connecting bar 19 interfered with the boom of the machines

manufactured and sold by the Keystone Driller Company about which you have been testifying?

Mr. Edgerton: The question objected to as leading and improper.

A. That is correct.

Q. Kindly mark on this tracing, referred to in the previous question, numerals and letters corresponding to like parts on the drawing of Defendant's Exhibit 24?

A. Witness marks the drawing.

Mr. Mahoney: Tracing just referred to by the witness in his answer to Q. 36 and Q. 37, is hereby offered in evidence as Defendant's Exhibit No. 34 and the Notary is requested to mark the same, "Defendant's Exhibit 34, tracing showing interference between connecting bar 19 and boom of machines made and sold by the Keystone Driller Company.

Mr. Edgerton: The exhibit is objected to as immaterial, incompetent and insufficiently proven.

(Narrative continued.) The blue print which I have just been handed is a Keystone Driller Company blue print, the general title is "Details Ditcher Scoop for Excavator Machine." This blue print bears the date of June 13, 1914. The date on the drawing would mean that this drawing was made or completed on June 13, 1914. This drawing bears the number P 48. The letter P in front of the number on this drawing was a designation used in connection with power shovel parts of drawings. Referring to part marked P 2805 on this drawing, that part is a beam connecting bar. This part P 2805 corresponds to the part marked No. 19 of Figure 1 of Defendant's Exhibit 24. The part marked P 2805 on Keystone Driller Company drawing P 48 was the connecting bar that was first used on machines manufactured and sold by the Keystone Driller Company under the Clutter patent 1,317,431, Defendant's Exhibit 24. This part P 2805 on Keystone drawing P 48 was the straight link that I have testified interfered with the end of the boom.

Mr. Mahoney: The Keystone Driller Company blue print No. P 48 entitled "Details—Ditcher Scoop for Excavator Machine" is hereby offered in evidence and the notary is requested to mark the same "Defendant's Exhibit No. 35, Keystone Driller Company drawing P 48."

(Narrative continued.) The catalog that has just been handed me is a Keystone Driller Company catalog. On page 1 the title of this catalog "Bulletin 901—4th Edition January, 1917." Referring to page 7 of this Bulletin 901 the figure 708 designates a Keystone ditcher outfit. This illustration of figure 708 shows the ditching machine that was manufactured and sold by the Keystone Driller Company while I was employed by them. This illustration figure 708 on page 7 of Keystone Driller Company Bulletin No. 901 represents an actual photograph of a Keystone Driller machine. This figure 708 shows the Keystone Driller Company machine having a straight connecting bar 19 thereon about which I have been testifying. I have marked with the letter "B" on figure 708 the point where the connecting bar contacted or interfered with the end of the boom during a certain part of the cycle of operation of this machine. The machine shown in Keystone Bulletin 901 and illustrated in Figure 708 was manufactured and sold by the Keystone Driller Company prior to the date of January, 1917. This machine as I have testified had the straight connecting bar thereon, which contacted with the end of the boom at the point marked with the letter "B," and which acted as a stop during a certain cycle of the operation of the machine. Referring to Bulletin 901, page 9, Figure 713 shows a ditcher scoop. The ditcher scoop shown in Figure 713 was actually made and sold by the Keystone Driller Company prior to January 1, 1917. This Figure 713 also shows the straight connecting bar which was used on the Keystone Driller machine and which connecting bar interfered with the end of the boom as I have testified.

Mr. Mahoney: The parts of Keystone Driller Company catalog previously referred to by the witness in his answers to the foregoing questions consisting of the cover, the inside title page (1) bearing the title Bulletin 901, 4th Edition, January, 1917, pages 7 and 9 are hereby offered in evidence as Defendant's Exhibit No. 36 and the Notary is requested to mark the same "Keystone Driller Company catalog consisting of the outside cover page, inside title page (1) bearing the title Bulletin 901, 4th Edition, January, 1917, and pages 7 and 9 thereof."

No cross examination.

Deposition closed.

Mr. Mahoney: Deposition of George E. Wagner and Defendant's Exhibits 34, 35, 36 offered in evidence during the taking of deposition are hereby offered in evidence here.

GEORGE E. TURNER, a witness called by defendants, being recalled, testified as follows:

DIRECT EXAMINATION by Mr. Corbett.

I have been actively and directly employed, in either the designing, manufacturing, selling or operation of excavating machinery for thirty-four years. At the present time I am engaged in designing excavating machines. I have read and I am familiar with the depositions relating to the development of Daniel H. Mahoney, which has been presented in this suit.

Q. Will you please compare the structure of the Mahoney with the machine that was used in the cornfield south of Vincennes, Indiana, with the machine shown in the LeRoy Clutter patent in suit?

Mr. Richey: You mean the one in Exhibit 4?

Mr. Corbett: In speaking of the machine used in the cornfield, I refer to Defendant's No. 4. Refer to that.

The Court: Well, it is the Mahoney machine.

Mr. Corbett: Mahoney machine, yes.

A. I will answer that question, Your Honor, by using this enlarged photograph of the Mahoney machine.

This is the machine that was tried out or tested south of Vincennes. In this machine there appears a tractor which was used as a motive power of towing the machine or moving it over the work, and at the same time there was a special steam connection between the boiler of that tractor and the engine of the digging mechanism, which supplied all the steam and which actually operated the digging part of the machine. There is shown here the front end, an A frame built up vertically, and outwardly from that inclined forward is a mast tied across here to this A frame, and from this here running upwardly is a boom B, shown here. Pivoted in this boom at this point is the handle G, and on the lower end of the handle there is a scoop T, and this is pivoted in the forks of the handle here (indicating). On the outside of the handle is a pipe strut, hinged here near the top end of the handle, and the intention or thought, apparently, was that this would drop in on top of the bucket when it was

down in the work travelling forward with its rear end down, to act as a strut, to keep the bucket from turning over, if that should happen.

There is a pulling line here, somewhat indistinct, rather hard to see, from the forward open end of the bucket into the machine. There is a hoist line marked "E" here at the top. This is shown in three parts, two of these parts passing around the sheave here, coupled with the links A to the short upper end of the handle G, and the other part, the third part, is tied to the boom here (indicating). There is another line here passing over the sheave at the top, which comes down and passes around a small pulling sheave at the back of the bucket, which is carried on up and tied to the boom here (indicating).

Q. Please compare that machine with the device of the LeRoy Clutter patent? A. In this machine, the boom B corresponds to the boom 15 in the Clutter, in red. The dipper stick G corresponds to this dipper stick here marked 1 in Clutter. The bucket marked T corresponds to a point here, for example, marked 3 in blue. This lower line, which is somewhat indistinct, the hauling or pulling line, corresponds to this one here marked 23 in the Clutter. This line up above marked E in the three parts corresponds to this chain or line here, marked 21, in two parts. The links here, marked A, correspond to these links here marked 19. This additional line in the back of the bucket corresponds with this line here to the latch, that being used for the dumping operation there.

Q. Please compare briefly this Mahoney structure with the structure used by the Osgood Company, and compare the two briefly with the structure shown in the Clutter patent in suit. A. I will use this chart marked 17 in answering this question. In comparing the Mahoney and the Osgood, in these two machines, in red are shown booms pivoted at the lower end; there are shown dipper handles pivoted between their ends, in orange here, one in the outer end of the boom, and the other near the outer end, both pivoted in the boom. They are shown in both, in the Osgood rigidly attached to the lower end of the handle, and in the Mahoney pivotally attached. There is shown in each a hauling or pulling line attached to the inward and open end of the bucket; there is shown a hoist line, which is shown in three parts here in Mahoney and in three parts here in the Osgood. There is

shown in each of these a connection with this upper line, a link connection shown here (indicating).

Q. Each of those links carries a sheave, do they not? A. Carry a sheave. The line here passing out to the rear is a latch tripping line. In this it is shown here over this small sheave.

Comparing the two with the Clutter, or rather Clutter with those two, we have here in the Clutter the boom pivoted at its lower end, a handle pivoted through the boom between its ends here (indicating); the bucket pivoted at its rear end to a handle with the lower end, but arranged with this sliding pin to the latch here by which it can be made rigidly attached. We have a pulling line, the same as the other; we have the hoisting line attached here through these links to the upper end of the handle, and the sheave chain support here, with these upstanding members, which do not appear in the other two.

Q. Assuming that claim 4 of the Clutter patent in suit is broad enough to read upon the Osgood structure, please point out to the court whether or not that claim reads upon—reads literally upon the Mahoney structure?

Mr. Richey: Well, I object to that. The interpretation of the claim, and reading of the claim upon the particular structure is the function of the court.

Mr. Corbett: Your Honor, this is common practice in patent litigation, and it is merely for indicating by illustrative chart the expert's interpretation of the references.

The Court: I think he may do that. It is not binding upon the court.

A. I will use, Your Honor, then this chart. In an excavating machine a pivoted boom, which we find here. Second, a scoop-carrying member pivotally connected therewith.

Q. What is the description of that? A. A scoop-carrying member pivotally connected therewith.

Q. I mean, what is the color of that part? A. That is orange. Then, a pulling member for elevating and lowering said boom. That is in black here. A pivotal means carried by the boom and connecting the pulling member therewith, and said scoop-carrying member. A scoop connected with the scoop-carrying member and

projecting toward the boom (indicating). And a pulling member connected with said scoop (indicating).

The Court: Now, it reads the same way on the Osgood device, doesn't it?

Mr. Corbett: Well, if it is interpreted broadly; our position is that if it is interpreted broadly to read on the Osgood device, it reads the same way on this device.

Mr. Richey: Of course, our contention is different.

Q. Have you read, and are you familiar with, the depositions of John B. Webber and Walter S. Culver? A. I have, and I am.

Q. Will you please briefly summarize for the court the structure of the machine referred to in these depositions, its manner of operation, and the condition under which it is operated?

The Court: You have got two Webber patents here, Mr. Corbett, haven't you? You are referring to No. 557,350.

Mr. Corbett: Well, anyway this relates to the use of the machine, the Webber machine, the Vulcan Iron Works.

Mr. Richey: You contend this was the same machine that was discussed in the deposition?

Mr. Corbett: 557,350 is the patent that the matter relates to.

The Court: This is 528,312.

Mr. Corbett: Better refer to the patent itself.

The Court: Well, this is the patent that was in the Cleveland suit, according to the list that you gave me. This is an earlier Webber patent than the one you read the depositions about, as I gather it.

Mr. Corbett: Perhaps it is.

Mr. Richey: This patent was not in the Cleveland suit. Here is the one that was in the Cleveland suit.

Mr. Corbett: Well, he can talk, Your Honor, from the photograph of the device.

The Court: All right. From the listing, when the prior art patents were given, it was agreed that J. B. Webber 528,312 was in the Cleveland suit. That is this patent.

Mr. Richey: Well, I am sorry, Your Honor, but somebody misled you, and I must apologize. I think everybody will agree that this has an angle in the boom there, and that is a curve there.

Mr. Mahoney: Different structure as shown in the patent. There was a structure in the deposition that we took, and that showed that this man had made a device different from that in the other patent; he made a device with some improvements.

Mr. Richey: Well, this patent was not set up in the answer, No. 528,312. Let's get straightened out about these two patents, regardless of the depositions. This 528,312 is not set up in the answer in this case.

Mr. Corbett: That is immaterial.

Mr. Richey: And it was not in the Cleveland case. That is right?

Mr. Corbett: It can be offered at any time.

Mr. Richey: Well, let's get it straightened out first.

The Court: You gave me a list of prior art patents when you started this case, and you gave me 528,312 as being in the Cleveland suit. That is this patent. Now, Mr. Richey says that is a mistake. I would like to get it straightened out.

Mr. Corbett: Yes, Your Honor, we want to get it straightened out.

Mr. Richey: Well, we object to this as not being set up in the answer.

Mr. Corbett: We are at liberty to discuss any part of the prior art.

Mr. Mahoney: We can offer it at any time, just as a part of the prior art.

Mr. Corbett: We are entitled to discuss it as a part of the prior art.

Mr. Richey: I think that is correct, but I object to it as far as it being used as an anticipation.

Mr. Corbett: We are not using it as an anticipation but as a part of the prior art.

Mr. Richey: Well, all right.

Mr. Corbett: We will get that matter straightened out for you, I will go ahead, if Your Honor has no objection.

The Court: All right.

(Last question read)

A. This is chart No. 2, J. B. Webber, No. 528,312, October 30, 1894. Here we have in this machine a boom 4. In this machine we have a boom extending outwardly but not pivoted, pivoted in the outer end; we have a handle marked 4 in the patent between its ends; we have a hauling member which also acts as a hoisting member,

marked 62 in this patent, extending upwardly to the central or higher portion of the boom passing over the sheaves there and then inward to the machine. This is an instroke machine, and one where this particular construction could be removed and replaced by the standard out-stroke boom dipper handle. In other words, the rear portion is just a standard shovel. In operation, the dipper would be swung outwardly and away, and then dropped into the work and pulled in by the line 62 to fill a bucket, and finally as it come to the top of the surface would be carried on up by that line as a hoisting line to about as high a point as you could possibly go to with the boom. At this point the whole assembly, the boom, handle and bucket would be swung out as usual, and ordinarily to one side or the other, and the contents would be dumped from the bottom of this bucket, which is marked 5 here, by tripping the latch, which is the same as if the bucket was operated on a shovel in the opposite direction. And that could be done either on a spoil bank or in cars or wagons. This comes up to a point here (indicating), and then it is in position to be swung out. In that case this bottom would be over a truck or a car, and when you tripped the latch, it would be just the same, it is the same handle and bucket used in the regular way, and then the contents would be dropped directly into a truck or wagon, or on the spoil bank.

The idea involved in a machine like this was to carry the weight of the machine backwardly to the rear from the excavation before the surface is disturbed, as are all these instroke type of machines, and a machine of this type could be used, of course, for digging trenches for laying water pipes just the same way as any other machine of the instroke, of that type. This machine was used for digging large trenches for laying water pipe, and it could be used, of course, for strip mining; that is, mining in material that was taken up over a considerable area and dumped into cars and hauled away for disposal.

Mr. Corbett: Your Honor, before going on, so as to clear up that question, our understanding is that this patent 557,350, which is referred to in this deposition, was in the Cleveland suit; there was no testimony about the use of it.

The Court: No testimony about use?

Mr. Mahoney: No.

Mr. Corbett: The other patent, No. 528,312, was not in the Cleveland suit. I think that straightens that out.

The Court: 528,312, you say, was not? Well, now, I have got the notation here that it was, and I was told so by somebody.

Mr. Corbett: Well, I don't know how that come about, but I think we are straight on it now.

Mr. Mahoney: This one here was not in the Cleveland suit.

The Court: How about that, Mr. Richey?

Mr. Richey: No, sir, that was not in the Cleveland suit. But we claim that the testimony of Mr. Shaefer—

Mr. Mahoney: Mr. Shaefer never testified about any of the Webber patents.

Mr. Richey: Wait until I have gotten through. We claim that the testimony of Mr. Shaefer was with regard to this type of machine shown in the Webber patent.

The Court: You are relying on the record, 112 and 113?

Mr. Richey: I think that is right.

The Court: Well, this is the Vulcan machine, isn't it?

Mr. Mahoney: This is the Vulcan.

Mr. Richey: Both of them the same thing; except for bolts and things of that kind.

Mr. Mahoney: No testimony offered about any Vulcan machine in the Cleveland suit.

The Court: You claim now that the machine referred to on pages 112 and 113 in the Byers record is the same machine as this Webber patent?

Mr. Richey: It is not identically the same machine, but it is the same type of machine, and it has the same boom that swing in horizontally, but not in vertically, with the dipper on the end of the stick, that runs up and down and swings in.

Mr. Corbett: I think that makes it clear that that is not the same machine.

Mr. Mahoney: Not even made by the same company, Your Honor.

The Court: Well, that is a matter of argument.

Q. Have you read, and are you familiar with, the deposition of F. H. King which has been read in this suit? A. I have, and I am.

Q. Will you briefly summarize for the court the operation and structure of the device testified to by Mr. King?

The Court: Well, now, that is with reference to the King patent.

Mr. Corbett: Yes.

A. This is chart 3, Your Honor, G. W. King shovel. This is No. 579,589, March 30, 1897. In this machine we have a triangular-shaped boom, in red; we have a dipper handle, in orange, marked L; the boom is marked in one place with a small "d"; and this handle L pivoted between its ends at the outer end of the boom, and on the lower end of the handle we have the scoop or bucket M rigidly attached. There is a hauling line, a hoisting line marked N, and in that operation of this machine, the bucket is swung back in this position, and the line N pulls it forward into the work, to dig and fill it, and then continues as a hoisting line bringing it up to as high a point as is possible here on the boom. In this case it is swung out to a stop as standard shovels swing their booms, with the bottom of the bucket here in this position. This brings it over a car or spoil bank for dumping. This has the same bottom door as in standard shovel buckets, practically the same thing, turned in the opposite direction, and the door is then tripped to dump on the spoil bank or into cars. A machine like this could be used, of course, for operating over the surface; could be used for digging below the level, for digging trenches, and also could be used, and this particular machine was used, in mining phosphate rock, and I think it was designed at that time when that problem come up, to get that rock out without stripping it with the standard shovel; the fact of going forward into the phosphate, the material underneath would be too soft to take care of that temporary trackage of the weight of the machine, so the machine was worked to strip off the overburden or whatever it is called, having the benefit of the solidity of the phosphate rock as it reached up and worked inwardly and raised that.

Mr. Richey: Well, I object to all that as being hearsay, unless he saw the machine working in phosphate rock. I think we ought to be cautioned as to what he knows of his own knowledge.

Mr. Corbett: This witness is an expert on this subject matter.

Mr. Richey: I don't care if he is an expert. He cannot testify to facts that he don't know of his own knowledge.

Mr. Corbett: He is not testifying to facts; he is testifying the way the machine works.

The Court: Well, he is testifying on the assumption that these depositions are true, as I see it.

Mr. Richey: Well, that is all right, to express an opinion, but when he states that it was used to dig phosphate rock, he doesn't know that of his own knowledge.

The Court: I understand that.

Q. Please take the patent to Clutter, 1,317,431, and read the sentence beginning on page 1, line 75, and also the sentence immediately following—read it out loud. A. On page 1, beginning at line 75, "The said sheave 18 is also pivotally connected with the boom 15 at 19c by supports 17. Said supports 17 extend beyond the sheave 18 to form a guide for pulling member 21; said pulling member 21 may be operated by any suitable means. Said boom 15 is adapted to be pivotally connected with the machine at 26."

Q. What is your understanding of the purpose and action of these supports 17 in this Clutter patented device? A. My understanding of the purpose and use of these supports 19b is that they are to carry the weight of this sheave and the weight of the chain, and then that they extend upwardly and enclose the chain in such a manner as would prevent it getting off of the sheave. In other words, of fixing this weight here so that it cannot drop down onto the bottom.

Q. Do you find in defendant's structure any element which looks like these supports 17, or which have the same purpose of action? A. I do not.

Q. Will you explain to the court what, if any, differences exist between the operation of the back hoe wherein the ditcher stick is connected at its upper end on the hoisting line by a link carrying the sheave at its outer end and having this sheave supported from the boom as in the device of the Clutter patent, and the operation of a back hoe wherein the ditcher stick is connected at its upper end with the hoisting line by link carrying the sheave at its outer end, with the outer end of the link and the sheave not supported from the boom? A. Referring to this chart 66, the LeRoy P. Clutter patent, where the upstanding supports are in place, and these bars reaching out to the handle here, there is a diversion

of the power in the upper line of its effort to two points, one here on the boom considerably from its upper end and one here; any operation and arrangement like this would restrict to a considerable extent the upward movement of the handle and bucket; or, in other words, it would become sluggish at a certain point as in distinction where the supports were not there, and the line was direct, all the pull through these two bars back to the pulling point here (indicating).

Q. You have observed the Model P-15, have you not? A. Yes, sir.

Q. Will you state whether or not there is any difference in the question of the degree of power exerted by the operation of the lines in this model in comparison with the operation of the lines in an actual excavating machine of this type? A. There would be this difference, that in a model there is no way to determine the amount of power used in the model. In other words, I could use the model with my hands, and on a model of that size I might be exerting five times the power that would be exerted by the actual engine which operates the full sized machine; in other words, the leverages here over such a small model as that would not be the same at all as in a full sized machine.

Q. Now, have you read, and do you understand, the second Downie patent in suit, No. 1,543,250? A. I have, and I understand that patent.

Q. Please briefly explain to the court the problem which Downie conceived he was faced with, and refer to the specification of this second Downie patent, to illustrate what he considered to be his problem. A. This is the second Downie patent, 1,543,250, and I will use this first sheet. The problem is this, I believe, that when the point 7, where the handle is pivoted to the boom, and the point 14, where the links are pivoted to the handle, the end of the handle and the pivot or pin in which the sheave 18 turns, approach closely together, as you see here, there becomes what has been termed in this discussion a blind point.

Q. Please read from the patent any particular portions that illustrate where this blind spot was supposed to occur, and just what effect Downie conceived the blind spot created, and what he overcame. A. On page 1 of the specifications, line about 26 to 35, I will read: "More specifically, it consists in providing means for suspending the action of the connecting bar above so that the

connecting bar and the ditcher stick remain relatively motionless during such interval as the boom remains above a predetermined angle of elevation."

Q. In other words, Downie was particularly interested in the high angles of the boom where extremely acute conditions existed between the link and the boom and the stick; is that right? A. Yes, sir.

Q. Now, is there anything else in the patent specification that may throw a little light on that? A. On page 2 of this specification, at line 9, I will read down to the 19th line: "It has been found, however, that when the pivot bolts 7 and 14 are properly located with respect to the line of tension through the connecting bar 15 to give the best results with the greatest conservation of power under certain conditions, the pivot bolt 7 will be substantially in the line of pull between the cable 22 and the connecting bar pivot 14, so that it is difficult to swing the scoop 15 upwardly to gain the desired spotting range."

Again, on the same page, at line 104 down to 122 or 123: "It is believed that the attainment of this increased spotting range by other means, such as by altering the relative location of the pivots 7 and 14 with respect to each other and to the ditcher stick is not feasible in this type of machine. It will be either prohibitively wasteful of power, or would sacrifice a prohibitive degree of outward reach of the stick when lowered or extended at the beginning of the digging operation. The position of the pivots 7 and 14 is governed by considerations of power, economy and necessary digging travel or sweep of the scoop and cannot therefore be altered in order to gain the desired spotting range or outward boom reach."

Q. As I understand, Mr. Downie conceived that he is limited as to the length of his arm by the power conditions, owing to the fact that there is a continual, or more or less continual, conflict between the upper arm of the stick and the lower arm of the stick. What is your opinion regarding that condition of conflict, with any reason that you have bearing on it? A. In the actual operation of the two line instroke machine of this type, while actually digging and loading the bucket and performing the usual function, there cannot be any direct opposition of these two lines, or antagonism. There may be a short interval of time. I can illustrate that with this description. When a machine of this type is digging,

to fill a bucket, if the material is hard, the weight of the handle and the boom is always let down on the bucket, to hold it into that work, in which case the upper line is practically idle or is slackened off. During that time, of course, the full amount of power is then applied to the hauling line to dig and discharge, and when that operation is completed, and that power is not needed there any more, the upper line comes into play to raise the entire mechanism, or the bucket and contents up, and at the time the lower line, which at first was using all of the power is using practically none, it is then being released, so that the full effect would be in hoisting. There might be a time then, of course, when the load is swung up and the operation completed by swinging, all of the effort is on the upper line, because the lower line must be released. When, of course, they are balanced out in the air, just one against the other, neither being moved up and down, there is, of course, a constant playing between the two lines, but in neither case is either using the full power separately.

Q. Does this Downie second patent in suit show whether the back hoe attachment is mounted upon a full revolving machine, or 180 degree revolving machine? A. It shows that it is mounted on a semi-swing 180 degree machine.

Q. What, if any, difference exists as between the dumping of a back hoe bucket mounted on a full revolving machine, and a bucket mounted on an 180 degree machine. A. When the back hoe device is mounted on a full revolving machine, of course the dumping can take place anywhere in the full circle, 360 degrees. You can dump to the rear of the machine, if that is preferable. But there is also this difference: In the full revolving machine, the turning center is in the direct center of the operating mechanism, and not out just where the boom is pivoted. In other words, as the machine swings around on its center, instead of standing that way and the boom merely doing this (indicating), it turns right around and you get an additional length, and you get a further dumping of this distance.

Q. In other words, the whole cab which carries the boom is mounted at its center, and rotates? A. Rotates, that is right.

Q. Freely, whereas the pivoted point of the boom in the 180 degree swing is at a considerable distance, or

substantial distance, in advance of the center of the machine; is that right? A. That is right, yes, sir.

Q. Now, what difference does there exist in the necessity for any particular placing of the wagon or truck to be filled in one machine or the other? A. In the full revolving type, where a hoe is used it would be possible to bring the trucks in directly in the rear of the hoe, and bring each bucketful right around and dump it in the rear. With the semi-swing type, of course that would not be possible, as it would be necessary to have a place to get them in somewhat forward, along the side, and sometimes forward of the front end of the machine.

Q. As a matter of fact, with the full revolving machine is it a fact that if you should go into a narrow street or narrow road, and wanted to load your wagon and you were cramped for room on the side of your machine, you could have your wagon placed in the rear, and you could place your wagon in behind the machine, load your bucket in front and swing it around and empty into the wagon in the back of the machine; is that correct? A. You could.

Q. And that is commonly done, is it not? A. Yes, sir.

Q. And when you have your wagon in the back of the machine, or your truck or wagon, you can place it out any distance with respect to the machine; you can place it far away from the machine or close to the machine; is that correct? A. Just as you wish.

Q. But that is hardly true under certain conditions, where you have 180 degree swing—is it necessary—I think you said, or did you say, it was necessary for the wagon or truck to be up by the front of the machine? A. Yes, sir.

Q. Usually on the side—why? A. Because the 180 degree swing cannot get the boom around any more than at right angles, or hardly in that position, for dumping.

Q. In other words, it cannot swing back around the machine or dump around the side of the machine? A. No.

Q. Are you familiar with the defendant's back hoe attachment and the machine upon which it is customarily mounted? A. I am.

Q. Have you observed defendant's machine and back attachment in the operation of digging and dumping? A. I have.

Mr. Richey: You mean both defendants—

Mr. Corbett: Well, it would probably simplify the thing—both defendants. I represent the Osgood, but Mr. Reed would probably want to ask him the same question, anyhow.

Q. Will you state whether or not in your opinion defendant was faced with the problem indicated in the second patent to Downie, giving your reasons for your opinion? A. No, I don't think they were. In the construction of the machine there does not appear to be any place where there was any need of any special piece of attachment put on.

The Court: For the blind spot?

The Witness: Yes, at any particular spot, to put on there for the purpose of meeting that particular condition. That is, I cannot see that in the construction.

Q. Well, why don't you think that? A. When the maching was pulled up to some height, I have seen them in operation where there was no contact or anything even when the buckets were up, we will say 12 feet 6 from the ground.

Q. Well, how about the normal operating height of the scoop; did you observe several different heights of the scoop in defendant's machine? A. I have, from the normal dumping height from five or six feet, and even seven or eight, there is no approach anywhere in the mechanism or any possible conflict of anything in there.

Q. Well, even going higher, what elevations have you observed? A. Up to as high as 12 foot 6.

The Court: Well, does it use the stops that are involved in the second Downie patent?

The Witness: No, no stops.

The Court: Or any devices used or suggested by the second Downie patent?

The Witness: No.

The Court: They don't use them?

The Witness: Don't use them.

Q. Have you any drawings showing the structure—

I want to say, Your Honor, that we are going to make the structure itself absolutely clear, beyond any question, to you before we finish.

Have you any drawings showing the structure of defendant's ditcher stick, and particularly showing the reenforcing channel plate on the side of the ditcher stick which ordinarily faces the boom?

Mr. Corbett: I think it is that channel plate which has been suggested, Your Honor, that creates some interference, so as to clear that matter up before you.

A. Yes, I have such a drawing.

Mr. Corbett: I want to say, Your Honor, in order to clarify this matter right now, that in the Byers suit, at least one of the Byers devices—in the first place, the Byers machine was an 180 degree swing machine, and at least one of the Byers devices had stops, these abutments, which appeared to be practically identical with plaintiff's abutments. I think that the exhibits in the Byers case show that.

Mr. Richey: That is true, but it is a well known principle of the patent law that you cannot escape an infringing by making two parts one, or making two parts integral.

A. With this drawing, Your Honor, this represents a side view.

Q. Mr. Turner, this drawing that you have illustrates the Osgood construction? A. Yes, sir, the Osgood.

Mr. Corbett: There is a slight difference in construction there.

The Witness: This is in proportion scale. This is the side view of it, and this is the rear view.

Q. Mr. Turner, you will have to take a pencil and put a letter on there, and indicate the side view and the rear view so that we will have it for the record. A. In the side view you will see the pair of links we have been talking about at an acute angle.

Q. What is the number of those links, or give it a letter and refer to it for the record? A. The bar marked C, brought down in an acute angle until it touches the corner of this channel member D, the channel member D starting down here at the bottom and extending up to this point, a distance of several feet, and it is only when you bring this down to an acute angle that it touches at this point here, this square corner.

Q. Well, in the actual operation of the device which you have observed, did it ever, in the normal range of operation of the shovel, working operation of the shovel, did that contact actually occur? A. Not in any of the normal ranges that I have spoken of.

Q. Will you state whether or not in your opinion this channel plate was intended to act as a stop or abutment in the manner similar to stops or abutments 23 or 24 of the second Downie patent, giving your reasons for your opinion? A. I do not think this was intended for a stop. In the first place, if a bar like that was put on for a stop, it would hardly be fastened to leave this square sharp corner here. In other words, it would be cut off of the same line that this bar would come to, in that position, because after the bar touches it, there is no further movement there.

Q. You have been talking there about the bar D, have you not? A. The link C on the channel D, the contact at that point. Another reason would be that no designer, designing a machine of this kind, would use a channel bar several feet long, put on in that manner, just to create a stop at this point.

The Court: He would economize it a little more?

The Witness: Yes, he could make a good many stops out of such a bar as that.

Q. Do you know what the purpose of that bar was? A. That bar was put on to reinforce the entire length of the handle, to stiffen it against the twisting strain.

The Court: You mean that this other function was something that just developed accidentally, then, or had not been looked for?

The Witness: It just simply, when the handle was not found to be strong enough, letting this channel off in this position, adding that member to it stiffened it.

Mr. Corbett: The contention is, and I think it is clear from the patent, that the patent speaks of this interference being created purposely during the working range of the shovel. Now, our contention is that during the working range of the shovel there is no interference at all, no contact at all between the upper end of the link and that channel. That will make the matter clear, I believe.

Q. Please explain to the court the relation which the height of the mast and the length of the arm of the ditcher stick above the pivot has to this so-called problem of the blind spot. If you have any diagrams that illustrate that, it will be well to refer to them, and in referring to these diagrams, refer to the numbers or letters on them to get them into the record. A. When the dis-

tance represented by the mast from the pivot point to the bottom, to a pivot point here (indicating) is increased—

Q. Just give those numbers. A. The mast 1.

The Court: I suppose we can save a little time by adjourning now and putting those numbers on.

(Noon recess)

(Tuesday afternoon session, March 10, 1931)

Q. Restating the question put to you before lunch, please explain the effect of the relation of the height of the mast and the length of the upper arm of the ditcher stick, and state what that has to do with the so-called problem of the blind spot,—referring to any diagram you may care to use for illustration? A. This is chart 17. The mast is marked "1" here. The distance from this point to pivot 6 up to the center line of pull 7, is what is referred to as the height of the mast; and the distance from the upper end of the handle, from the point marked 9 to its upper end, is what is referred to as the upper end of the handle. In case this height was increased and this length here increased, the effect of either one or both together would be to delay the approach of the blind spot or make it more remote.

The Court: By that you mean it does not eliminate it, but makes it more unlikely in the use of the machine?

A. Yes, it would be more unlikely.

Q. Have you any knowledge as to the height of the mast in plaintiff's patented structure in comparison to the height of the mast in defendant's patented structure? A. I know that in the defendant's structure that this distance in height from point 6 to point 7 is 9 feet. In the plaintiff's machine there is some difference. In other words, there is a sheave lower down, and there is a hinge to the turntable up above, so that the line of pull is not from here to here, but from here to a point intermediate between those two; and my knowledge of that is that it is probably one foot more.

Q. Which one? A. That the Osgood is about one foot more than the Clutter.

Q. What about the comparative lengths of the upper arm of the ditcher stick in this second Downie patent, and the upper arm of the ditcher stick in defendant's structure? A. The length of the upper arm of the ditcher stick in defendant's structure is close to or nearly twice as much as in the Clutter patent.

Q. Have you any diagram which illustrates the two possible ways of avoiding the blind spot in the normal operation of the machine, and showing what steps or illustrating what steps were taken by Mr. Downie in an endeavor to avoid this blind spot, or avoid this intersection of the pivot point which you have discussed, which I understand is the same thing? A. This is chart 60, with two views. In the upper view, the step taken by Mr. Downie is the placing of the abutment or stop marked C, abutting at a point here on the pivot 7; and this illustrates the short upper arm.

Q. What illustrates the short upper arm? A. The A-B distance illustrates the short upper arm, that is, the distance between 7 and 14 in the line of the arm. In this view—

Q. Which view? A. The lower view, C-D, as against A-B in the upper one.

Q. What does C-D represent? A. C-D represents in this lower one the length of the upper portion of the arm above the pivot point at 2.

Q. You figure those upper arms from the axis of the pivot which connects the stick to the boom, from there to the axis of the pivot which connects the link to the upper end of the stick, is that right? A. No, sir, this case is parallel to the center line in this view.

Q. In which view? A. Both of them, the upper and lower views, the distance is taken on the center line. In this case, the angularity here—

Q. Which case? A. The lower view is shown as a direct line from the end of the handle without any stops having been placed, or without any interference; while the upper one shows that after the stops are placed, a diverted line similar to this.

Q. Which line? A. This line at the top.

Q. What does it indicate? A. It indicates the direction of pull from the pivot here 14 back through 17 and then down to the machine.

Q. What is the wording above the lead line which is directed to that line you just mentioned? A. It would be diverting the line of force. In the lower view, the same line would be a straight line of force.

Q. Would you say that Downie, in attempting to overcome this blind spot, has raised the elevation of his pull by sort of pulling around the corner there to give that more of a horizontal leverage; is that what you would say? A. Well, in effect, yes.

Q. And that is the occasion for this discussion regarding the bending of the line which included the hoist line and the link, is that right? A. Yes, sir.

Q. Once again in connection with the demonstrations of defendant's structure, will you state whether or not, in the raising of the scoop to the various elevations from 6 to 12 feet or so, whether or not there was any bend in that combined line formed by the hoisting line and the link which connected the sheave to the top of the ditcher stick; was there any bend in the line of defendant's structure? A. There was not.

Q. In the normal operation of the machine? A. There was not.

The Court: And if there was not, then you argue there was no necessity for you to adopt devices like that stop, is that right?

Mr. Corbett: That is right, Your Honor.

The Witness: Yes.

Mr. Corbett: I would like at this point, since the matter came up before lunch, to call your attention to one of the forms of the Byers structure which was held to infringe this stop patent. There were three forms, but in Plaintiff's Exhibit P-33, in the present case, you will note that the bend link has a distinct stop extending from its under side downwardly approximately towards the pivot of the stick in the boom. I just want to get that matter clear. It also appears probably a little more clearly in Plaintiff's Exhibit P-32. Of course perhaps it will clarify the matter a little—I believe our friends will agree to this, that this question of interference only occurs in the upper range of the structure, preliminary to dumping; is that your understanding, Mr. Richey?

Mr. Richey: That depends upon what you mean by the upper range.

Mr. Corbett: At least, you are not claiming it occurs during the digging stroke; it is after the bucket is unloaded.

Mr. Richey: I understand that is the important feature of it. The blind spot occurs during the loading.

Mr. Corbett: Yes.

Mr. Richey: I do not know whether it serves any utility at the other time or not.

Q. Have you read the deposition of George Wagner which has been filed in this suit? A. I have.

Q. Will you briefly explain what bearing that Wagner deposition has upon this question of this second

Downie patent? A. This is chart No. 42. This is a sketch showing the point of contact referred to and marked here B and was particularly brought out in the deposition of which you speak. Here are the upstanding members 17 and the bars 19, and here is the corner of the boom marked A, showing the point where these bars 19 intersect.

The Court: The corners of the bars marked what, A?

The Witness: No, I mean the arm or boom A, the corner of the boom marked A. This point here which is marked B.

Q. Your point is that at a certain portion of the cycle there was an interference there between the stick and the link? A. As shown here, when the handle got out byond the vertical, there would be this interference at B.

Q. Have you any knowledge of any other prior art back hoe structures where means exist for limiting the angular approach of the stick to the member which connects the hoisting line to the top of the stick? A. No, sir, I have not.

Q. What prior art patents, if any, show an interference between the line which connects the upper end of the stick and the stick; have you any prior patents bearing on that? A. I don't think they bear in the same relation as this.

Q. What do you mean by that? A. There are limitations on the travel of the bucket. In other words, the bucket has a certain distance to go and it will either come block to block or against a boom,—something of that kind. There would not be any angularity like this given in the picture at that point.

The Court: It would not cause that kind of a situation.

A. That would not be the kind of stop.

Q. I direct your attention to the patent to Hoffmyer and ask you to explain that patent with reference to that feature?

Mr. Richey: What is the number of that?

The Witness: 1,385,322. This line will come down and touch at 17 slightly. The line 24, in the maximum upward to the upper end of the handle marked 19 would in the instroke of the bucket where the top of the handle goes outward, come down and touch slightly at the point

17, which is on the highest portion of the boom. It would then divert the line of pull somewhat.

Mr. Corbett: To make this clear, Mr. Richey says the Hoffmyer patent was in the Cleveland suit; but in the Cleveland suit, the plaintiff, as we see it, was not seeking such a broad interpretation of its patent. It was not necessary for it to seek that interpretation in view of the fact that the Byers Company bucket was identical in appearance. Now they are attempting to broaden out the interpretation of this patent to cover any sort of interference. That is the way we see it.

The Court: You claim—

Mr. Corbett: We claim we do not have any interference in the operating cycle of the machine; we do not find it necessary to provide for it; it does not occur in the actual practice.

Mr. Richey: It says normal cycle or operating cycle.

Mr. Corbett: Your patent claims speak of it.

Q. You might consider the other patent cited by defendant's answer with reference to this patent, and briefly discuss any question of interference that occurs in any of those patents. Please give the patent number and name. A. You mean general interference?

Q. General interference, yes. A. In this first one we were just discussing, the stop there is on the bucket coming up as high as it can.

Q. Give the number? A. 1,385,322, the Hoffmyer.

The Court: That is not set out in your answer, this particular patent.

Mr. Corbett: Yes, it is, Your Honor.

The Witness: That would be one of those limiting it.

Q. Give the numerals you are referring to also; is that the patent you have discussed already? A. Yes, sir.

Q. Take the next one? A. Patent 1,056,268, J. Fairbanks. We have a triangular handle here for the scoop, marked 12. On the inner end is a hoisting line marked 22. At a certain place in the hoist-effect, this handle turns directly upward. At that point there can be no further cutting stroke to the bucket on the lower end. Here the hoisting machine starts on the same line. That would be the limit of stroke in that bucket. The bucket could not go any farther than the dirt.

Mr. Richey: That patent was in the Cleveland case.

The Court: Yes.

The Witness: 1,562,288, Burke. When the bucket 25 with the lower end of the handle 24 is pulled upwardly, as shown here—

Q. Showing what figure? A. When the bucket 25 is pulled upwardly to this dotted position which is not marked, there is shown above the bucket an enlargement of the hoist line which would interfere at the sheave on the side of the boom, not marked; in other words that would limit the travel of that bucket.

Q. Referring to the question of the use of sheave-carrying links at the top of a ditcher stick, or in this art generally, have you any patents in the prior art which show the extent of the use of this idea? A. In a general way, links such as you refer to are used in a great many different kinds of construction, like booms and derricks.

Q. Have you any patents that show that? A. There is one to Bishop which particularly shows the links at the top.

Q. Please refer to any other patents you have showing that feature of links? A. There are some others in the 11 that we discussed.

Q. Well, in any other patents cited in the answer.

Mr. Richey: What was the number of that Bishop patent?

The Court: 1,100,864.

The Witness: This is chart 14, showing a number of derricks of different forms. Here is the Bishop, 1,100,-864, and the links are marked 11.

Here is another construction, patent 1,064,120, and the links are marked 9. There appears to be another Bishop on this card.

Q. Give the number of it? A. 1,103,476, and the links are designated as G; and some others that have derricks.

Q. Do all those derricks show links with sheaves? A. They show links with sheaves in the end in the same way.

Q. Just give a list of the numbers and the names and dates of each of those patents? A. The first, to Bishop was 1,100,864, dated June 23, 1914.

The second one I refer to is Baser, 1,064,120, and the date is June 10, 1913.

Mr. Richey: That was in the Cleveland case.

The Court: So was Bishop.

Mr. Richey: That particular Bishop was.

Mr. Corbett: There are two Bishops. This is just to show the prevalence of the links in the art.

The Court: All right.

The Witness: The second Bishop I referred to was 1,103,467, patented July 14, 1914. Here is one we did not refer to.

Q. Give them all. A. No. 997,542, dated July 11, 1914.

Q. Whose is it? A. M. G. Bunnell. Here is another, C. E. Bathrick, 1,102,356, April 16, 1912.

Q. Have you got them all? A. I think that is all, yes.

Q. Were you present at the demonstration made by the plaintiff, made last week at the Samuel Davis Coal yard? A. I was, yes.

Q. Have you compared the machine and back hoe attachment used at that demonstration with the machines disclosed in patents to Clutter, and the second Downie patent involved in this suit? A. I have, yes.

Q. Please take each of these two patents to Clutter and Downie and briefly point out any features different between the machine and back hoe attachment of each patent and machine and back hoe attachment which was used in said demonstration.

Mr. Corbett: Your Honor, at this point I might say that we are trying, so far as possible, to confine this witness' testimony to the first Clutter patent and the second Downie; and we expect to have another witness to take up these other patents. We will avoid duplication as far as possible to keep them from covering the same ground.

The Witness: As between the machine which was demonstrated and the Downie patent and the Clutter patent, the first most important difference was that the digging attachment was mounted on a full revolving shovel, these both being the semi-swing arrangement. The bucket attachment is entirely different of course from the Clutter as shown here. The bucket is a drop bottom bucket.

The Court: It was not necessary to have that device on there they had on there before?

A. No, sir.

Mr. Corbett: Which device is that?

The Witness: In the Clutter; the bucket was just hinged at the rear and tripped down, and the demonstrated machine, it was like this one in the Downie.

Q. It was a drop bottom? A. It was a drop bottom. Of course there are no turn tables like these, shown in either of these.

Q. Like which? A. Like the one shown in Downie, at the top. Of course in this it was not shown, and that of course is done away with and taken care of with the mechanism that revolves the entire shovel.

Q. In that question of turn table, at this point, with respect to the difference between the turn table mechanism shown in the Clutter patent and Downie patent, is there a material difference in the amount of power that can be applied between the device shown in the patents and the device demonstrated? A. Yes, sir, very much so.

Q. Would that have any bearing on the question of the ability to twist the boom or stick laterally? A. Yes, sir.

Q. Just what bearing would it have? A. The power is a great deal more, and if you were up against a bank and twisting sideways, you would not have the easement there is in this type, where swinging with a rope from the top, that can give and bend away out of line. In other words, your machine will pass on without pulling on the handle structure. The boom can remain back. There is another difference here I note in that machine, particularly in the matter of the handle.

Q. In the dipper stick? A. In the dipper stick. In both of these practically the same distance is shown here on the machines of this type.

Q. Both of the Clutter and Downie patents? A. Both the Clutter and Downie patents. On the machine demonstrated, instead of any bars coming down on the sides of the handle in this respect—

Q. You mean straddling the handle? A. Straddling the handle, they come down above the handle. In other words, this pivot 14 was raised very much higher than shown here.

Q. Shown in these patents? A. Shown in these patents, so that the bar came across the head of the stick; and the contact point or stops noted here as 23 were not here, or in other words they were not such contacts as this at all.

Q. You mean they were not used in the demonstration apparatus? A. No, sir, they were not. These bars coming across the top contacted with a small spot on the rear edge of the handle here.

Q. What was the effect of having that arm bearing on the top? A. The effect of that would be an increase in the upper arm length, in this respect, differently from this; where the forward arm which is increased would pass around to such a part of the arc, it would begin to lose its leverage or effectiveness. The second point in the rear would be coming up in position.

Q. Would it not increase the leverage very materially? A. The length of the arm and the leverage.

Q. Would you say that that was a substantial departure from the idea of having a short arm with stops to avoid a blind spot, and to give a better angle of pull? A. Yes, sir, I would say it was.

Q. Have you any knowledge from your own experience as to the practice prevalent to the filing date of the Clutter patent in suit with respect to the customary manner of closing the door of the bucket of the scoop or excavating shovel? If so, please state what you know about it? A. All doors on shovels from the time shovels have been first built have been specially arranged with such hinged construction that they will fall or drop shut before the bucket comes back to a vertical position.

Q. Can you show that hinged construction to the court? What chart are you referring to? A. This is chart No. 2.

Q. Put it upon the easel.

The Witness: Chart No. 2; this is the bucket, not marked, but in blue. Now in all shovels, whether this bucket works inwardly or outwardly, hinges are brought around on the back side. In other words, the center line of gravity is down through this way. You do not have to come back to vertical. That door will swing forward. The operators just slip those doors shut. In other words, it is not necessary to come away back past the vertical every time to get the doors shut, especially in the larger size shovels. There would be a large loss of time. You must shut your doors while up there. Just a slight motion in or out on the handle quickly will start that door. It will shut.

Q. Have you heard and understood the claims made by plaintiff's witnesses as to the capability of plaintiff's machine in undercutting? A. I have, yes.

Q. Please state what knowledge you have that may throw any light upon the practicability or desirability of this so-called undercutting? A. The undercutting we have been discussing is a matter of practicability, as I take it. The contractor wants to keep the machine busy, at its capacity. I have seen places where trenches have been diverted to one side a trifle and a pipe laid so as to put it back in the proper way. It is a slow process, and after you are done, you have just gained a little place at the bottom in which you can push the pipe. If the machine were carried ahead to its full capacity, it would do the work of a good many men. The machine might do it, but you would have to commence higher up and do it all the way down. You could not have many jacks in there. It would be a slow process. It would be accomplishing very little.

The Court: In other words, that kind of machine is too valuable for that, is that right?

The Witness: That is it.

Q. You have seen defendant's machine. Is there anything about defendant's construction that indicates whether or not those machines were designed to permit this twisting of the boom to effect this undercutting action?

Mr. Corbett: Your Honor, I want to say at this point that there has been so much more or less cloudy talk about the defendant's machines, and what these things will do, that I have had a machine shipped here. Some time in the near future, probably tomorrow, we would like to demonstrate the defendant's machines, both, so you can get a clear idea of structure; also Your Honor can get a better idea of this problem of dumping and how it may be done—if that is agreeable to you.

The Court: All right.

(Question read.)

A. No, sir, there is not. On the other hand there is plain evidence that rigidity and stiffness have been sought rather than flexibility, so far as twisting. To illustrate, the boom at the bottom where it pivots in instead of being straight all of the way, has been widened out and meets the machine at a socket of considerable width.

The Court: Could you not twist it farther out away from the machines?

The Witness: No. The beams are I-beams, spaced widely apart and tied together, with the thought of keeping that thickness all the way out. There is also a varying between the handle and the boom, with the same thought.

Mr. Corbett: Your Honor, I think the sight of that machine will show you conclusively about that question of twisting.

(Narrative continued.) I do not find anything in the drawing, description or claims of the Clutter patent in suit which indicates whether or not the ditcher stick could be moved upwardly into substantial alignment with the abutment in the digging cycle of operation. I would say the short upper arm, the pivot point up would prevent this alignment. I am speaking about the Clutter machine. In order to point out more definitely I mean I will take this diagram of the Clutter patent and illustrate what I have in mind. The method here in which the pulling line 21 is attached to the boom and the handle it supports 19-C (referring to chart No. 66) holding the sheave and chain in a fixed relation to the boom, and the arrangement of these bars 19 passing on up would prevent complete full reversal or inversion in line with the boom. I have referred to these upstanding members as 19-B. I believe the correct number is 17.

When I testified about the use of the King machine in the phosphate fields of Florida and South Carolina this morning some question was raised about my knowledge of this machine. At the time the King machine was being produced in the Marion shops, during that period I was in charge of an electric light and power and speed railroad. I was in those shops almost every day and met Mr. King in there and two or three other stockholders. I saw these machines that we have been discussing. This King patent was being developed and tested out in the yard. That is when I first learned there was a special use some place for a machine of that type. From Mr. King I gained the knowledge that they were going to use this machine on the phosphate work. I was familiar with the machine structure at that time.

The Court: Do you know personally of the character of this digging of phosphate? How does phosphate compare with other things?

The Witness: It would be classed as tough; in other words, a material that has no cleavage, no seams. Any-

thing tough can be shot if it needs to be; but there is no place where it will just pull apart in even layers. That is the idea of the material.

(Narrative continued.) It was not novel with LeRoy Clutter or Downie to produce an excavator that would cut a ditch or trench the width of the bucket only. Out-stroke shovels have been used for a great many years in cutting trenches and cutting them the width of the bucket. Then we have here in these references E. O. Rood and C. W. Rood. The Webber machine 528,312, patented October 30, 1894, is one that I had in mind that could do that.

The Court: Could do what?

The Witness: Make a trench the single width of the bucket. The King, 579,589, March 30, 1897, will do the same thing. The Mahoney, 1,194,204, would make a trench the width of the bucket. Fairbanks, 1,056,268, March 18, 1913, would make a single width trench with the bucket.

Mr. Corbett: That is enough.

(Narrative continued.). It was not novel with LeRoy P. Clutter or Downie to provide a machine of such a nature that various digging attachments were interchangeable on the same power plant or machine proper. Prior to Clutter or Downie developments all out-stroke shovels since they have been built in revolving form, have all carried different attachments; and a great many years before that, the larger ones, 18 or 20 years ago, had the drag line attachment on the boom, where they got their out-stroke taken off. That has been done with some of these very big machines built for 18 or 20 years. Vulcan and King both represent that. They took off the outstroke attachment and put on this instroke, just turned the bucket around. When they got through with that work, they took it off and put the outstroke attachment on.

It was not novel with LeRoy Clutter or Downie at the time the Clutter application and the second Downie application were filed to provide a machine whereby the digging was controlled by two lines. This feature is shown in the Fairbank's machine, and the Mahoney machine; the E. O. Rood and C. W. Rood machines show this.

Q. Have you any charts of these patents or devices you can show? I would like to have that two-line proposition cleared up.

The Court: You are referring now to the operation up to the time of unloading?

Mr. Corbett: Yes, I am referring to the actual digging operation.

The Court: Getting ready to unload?

Mr. Corbett: Yes, getting ready to unload; in other words heading the shovel out, digging and pulling it out.

The Court: Up to the unloading?

Mr. Corbett: Yes, not including the swinging. It is the claim of these plaintiffs and I think they will agree with me, that it was new with Clutter or Downie to provide two lines for controlling the motion out to dig, the downward motion in digging, and the bringing of the shovel up without regard to the swinging. Is that your contention?

Mr. Richey: We do not claim that much in this construction here. Clutter was the first fellow that controlled with two lines, like you drive a horse, so you can change direction at any time.

Mr. Corbett: You mean swinging?

Mr. Richey: This fellow here had the combined hoist and haul line. They were combined together. When he started to pull through, he had to complete; he could not go back; if he started to turn the horse to the right, he could not change his mind and turn him back again. Now there are these two men, Fairbanks and Rood. They were in the other case. The same contention was made there, that they were two lines; but the two lines do not function the same way. We claim that Clutter was the first man who had this ability to move the scoops in any one of four directions at any time,—just as Judge Simonds said in the opinion of the Circuit Court of Appeals: He was never hide-bound, or committed, to continue through once he started.

The Court: He could change his mind at any point?

Mr. Richey: Yes, he could change his mind at any point. It gave him dexterity in handling the scoop, and versatility in moving it any place he wanted. The four directions were up and down and in and out, any direction in the plane in which he was digging.

Mr. Corbett: I think it would not be a bad idea to strip this case of these glittering generalities at this point. I would like to find out what is your contention. Is it your contention that Clutter was the first to be able to perform the reaching out of the scoop and the digging in and pulling in of the scoop, and the elevation

up to the point of turning by the use of two lines? He was the first to do that?

Mr. Richey: I can go over that again for you, if you want me to.

Mr. Corbett: Suppose you do go over it again.

Mr. Richey: In this construction there are two lines in opposition to each other, just the same as the two reins on a horse. I can change that any time I want to in any direction, don't you see, like you can when guiding a horse; can set it down, pull it up, and put in any of those combinations you want to.

Mr. Corbett: Driving a horse means turning him to the side; you do not mean that.

Mr. Richey: Let us assume the horse is in horizontal; of course that is what I meant; I can change that any time I want to in any direction. If I was to take this line, combine those two lines, so that when I started to pull through, like that man Fairbanks, I got half a load of dirt the first time, I could not go back without dumping that; I would have to keep on going through once I was started and I would be committed to that direction. It is the same thing with the Rood constructions; that is what the evidence showed. That is what we mean by moving it in any way, any time, in any direction you want in the plane; that gives you the ability to strike where you please, go back and finish up your load, and do all of those functions.

Mr. Corbett: Then I would like to have the witness answer my question with that understanding.

The Court: All right.

The Witness: I will refer you first to Defendant's Exhibit 31, in the deposition of Mitchell.

The Court: Whose deposition?

The Witness: Deposition of William Mitchell of the Fairbanks machine. This is the Fairbanks machine, the same structure as shown on the card; and there are two lines on it, just two lines, one attached to the upper end of this triangular handle, and the other to the rear or opposite angle as it stands there.

Q. You can mark those with letters.

The Court: Your claim, in a couple of words, is, Mr. Richey, while those have two lines, they do not perform the function your two lines do?

Mr. Richey: That is it, yes.

The Court: Yours is more human.

Mr. Richey: Yes, that is right.

The Court: All right; just so I get the line of thought.

The Witness: There are two lines: One I have marked 1, and one I have marked 2; and there is a triangular-shaped handle made up of these bars marked 4; and there is the bucket or scoop somewhat differently shaped from any of these scoops we have been considering. That I have marked 3. Then there is a short piece of line which appears slack here, marked 5. In the operation of this machine I will say this: This shows the bucket in its inward stroke after it is filled and raised up. In other words, we are up here as high as we can go. In this position it has been pulled forward into the work by the line marked 2, pulling it forward into the work; pulling it forward into the work does not necessarily mean it has to go on through. There is another line on the back end of the handle. That can be operated to pull it back out of the work if that is desired or if it was not filled up; and that line marked 1 would do that if the operator wished to do that. There is nothing compelling him after he started to keep pulling it through clear to the top before he can reverse and go back and get another load. He can continue working it back and forth like that. This short line is attached to the back, in this bucket—sometimes called as a gait; that gait, when loaded, is backed against the back end of the bucket, pushed back there when this particular form of scoop was first pulled to the work. After getting up to this point and swinging out to the dump—of course these two lines are not called to function at all—the operation of dumping would simply be to hold on this line, hold on the upper line and ease out on this one. The result will be that the weight on here brings this up; that goes down; that takes the scoop back in this relation; but at a certain point in this line, having been set properly for that, it becomes taut and the back of the scoop does not travel; it just stops here; the bucket goes right on. That is the way the dumping is effected.

Mr. Richey: You are testifying how you think this might operate; not how it was operated; you did not see it operated?

The Witness: No.

Mr. Richey: Just say in your opinion it can be operated this way, instead of saying it was operated that way.

The Witness: The deposition I have read says this machine was used, and if it was used to dig ditches, it must have been operated.

Mr. Richey: I have no objection to your saying how you think it can operate; but when you say it did operate, just do not say that unless you know it of your own knowledge.

Mr. Corbett: If the machine is capable of doing this; that is the point.

Q. Will you take the Rood device and the Mahoney device and explain that question of two line control? A. This is the E. O. Rood device, No. 386,438, July 17, 1888. Here we have the handle marked 13, pivoted in the end of the boom, near the end marked 6. We have two lines, one marked 16, which is attached to the upper end of the handle, or near the upper end of the handle marked 13, and coming down and passing under the sheave to the handle; and we have another line attached to the front of the bucket. That is this line marked 22. Those are the only lines attached to the handle or the bucket. In this chart the bucket is shown in its outward position or dump position, or empty ready to enter the work, and is being held out there by the line 16, which is drawn down to this position—

Q. What position? A. The position shown in the chart here; and with this line, the boom and the handle in that position, and the bucket in that position, let down into contact with the work; and then the line 22, attached to the front of the bucket, would be used to draw it around to this dotted position, this upper line 16 released and paying out; in other words, one line is coming in and the other is going out; one cannot come in unless the other does go out; that would bring it into a position like this, which loads it. In that case the line 22 right in here at this point—there is no mark there—passes through the boom, will take the boom and bucket up, hoist it. This same movement I have described before actuating it here above, over the dump, will invert that bucket to empty it.

Q. Have you ever seen this device in operation? A. I have seen a number of these machines in operation, yes.

Q. Have you finished your description? A. I think that is all.

(Narrative continued.) I now take up the device of Mahoney patent 1,194,204, dated August 8, 1916. Here is the line marked 50, attached to the bucket marked 38, and line marked 44 attached to the upper end of the handle. In filling this bucket, the line 50 draws in, and at any point after that is drawn in far enough to fill it. The line 44 raises the handle, bucket and the boom, and there is again that same idea of two lines, one holding it on the bucket and one letting out on it while the other hoists up.

Comparing the spotting range of this Mahoney device with the device of the Clutter patent the difference that I see here in the spotting range of this Mahoney machine and the Clutter, is shown here where the bucket 38 is pivoted at the lower end of the handle, with the idea of having all of the weight and more of the load to the rear, so that when the bucket is filled and lifted, you tip down. The closed end would tip down; that would continue to stay in that position while it was being hoisted up. When elevated out of the work, it would tilt the heavy end down, and then it would be carried out this way, away from the machine with the upper rope. The bucket would be canted downward at the heavy end, and as this handle passed beyond the vertical, the action of the extra weight would still cant it down; and that could be carried out as far as it is necessary to dump, or as far as the line would pull it. It would still be in that position. Nothing has happened to turn it over yet.

With Clutter, the bucket is rigid. Whenever the handle comes to a vertical position, the bucket is horizontal. If the material is loose material, some of it could commence to discharge. As it goes on, it inverts and the balance would be discharged. If you used a latch type, the same thing would happen if you did not latch it at the vertical point.

I know of the Paige construction in which the bucket is mounted on the lower end of the ditcher stick. The Paige bucket is pivoted. It is a fact that these back-hoe shovels are still being used in which pivoted buckets are mounted on the lower end of the ditcher stick and swing freely.

Q. In view of the prior art and depositions offered in evidence from your own knowledge and experience was it novel with LeRoy Clutter or Downie to provide a machine that would pick or break into hard ground?

Mr. Richey: I don't like to object but it seems to me all these are questions which the court must decide.

Mr. Corbett: I want to get the art before him so he can decide.

Q. Will you produce any patents or refer to any devices that illustrate whether or not machines prior to Clutter and Downie were capable of picking or breaking into hard ground?

The Witness: C. W. Rood, 1,057,457, April 1, 1913.

Mr. Richey: That was in the Cleveland case was it not?

The Witness: In this machine, the bucket in blue marked F is shown with the cutting edge directly downward and vertically suspended, and the arms are shown folded back. These two arms in yellow marked G in position, if let down, it would strike the blow. It was intended to use it that way.

The Court: Would there be any other force behind that except the weight of the shovel itself?

A. There would be the force of the handle through these members pinned in here at g. In other words, that is a straight thrust member there in that position; push the bucket right down with the handle coming back of that stroke.

E. O. Rood, 386,438, July 17, 1888. Here the bucket blue B is extended outwardly ready for the downstroke into the work, and the cutting edge directly downward, cutting out on the line 18 would let that bucket down directly into the work. In other words, if it were winched to let it down heavily, it would come down with part of the weight of the arm on it, and strike directly on its point, the cutting edge.

The Court: Part of the weight of the boom and the stick?

The Witness: Part of the weight of the boom and the stick, held in that position. It is let out right here.

Q. Which line? A. This is line 16.

G. W. King, 579,589, the bucket in Blue M is not shown on this chart in the position in which it would strike the blow. In the operation of this machine when the bucket M is pulled up to the hoisting point, a pivot out here.

Q. Out where? A. Pivoted out here at the end of the boom, at a p[illegible], I think it is K.

Q. At the end of the boom, is it not? A. At the end of the boom is let down, comes back through a long swinging arc. There is nothing to hold it once this line keeps paying out. Checking this line stops it out here at a considerable angle. It brings these teeth in a downward position at that point somewhat close to the work; and then it is let in and would strike into the work, if it was let down.

Q. Strikes into the work on an angle? A. Strikes into the work on an angle.

Q. How about the Vulcan machine? Was that capable of picking or digging into hard ground? A. Just in the same relation as this one would be.

Q. Which one? A. The G. W. King patent.

Q. How about the Mahoney device? Could that be used for digging or picking into hard ground? A. Mahoney patent, 1,194,204, August 8th, 1916, the bucket here is shown, 38, is shown down inward loading, not in position to strike a blow; but if the handle marked 40 was extended out in the position where it is when it comes back over the work; it has been out to dump, and the bucket was turned upwardly through this line here.

Q. What number? A. Line 34; brought down so the teeth would strike, it could be made to strike a blow of that kind; or would if that were the desirable or reasonable way in which to use the machine.

Q. How many of these back hoes prior to the Clutter device have you seen in patents in defendant's answer, patents or other devices? About how many of them have you looked over or examined? A. We had eleven here.

Q. We showed eleven—how many more—how many altogether? A. 24—something like that.

Q. Did all of these back hoe devices remain on solid ground as the excavation progressed, rather than astride or over the wall of the ditch or the trench? A. Yes, they all remained above the work.

Q. Something was said here about the use of the term "pawing". Will you explain briefly what that means and point out whether or not it could be performed with prior art devices as shown in these patents or in the depositions? A. Pawing is an expression somewhat new to me in the operation of shovels or hoes; but I take it it means a short stroke, a scraping stroke, that is, you come in just a slight distance and slip out again, —I imagine something like a horse's pawing.

Q. That could be done with the E. O. Rood machine? A. Yes, sir.

Q. As shown in chart 1? A. Chart 1, this bucket marked B comes down into the work in that position, which is the normal position it goes to the work. The stroke was just started a short distance; and then the other line was put into operation; and it was brought back again. It might be raised slightly by the other line and then come back and come in again, and not continue right on through with the full stroke. That is what I understand by pawing. It could be done with that machine.

Q. You have had considerable experience with drag line machines, have you? A. Yes, sir.

Q. Can a drag line machine operate in soil containing rocks, rocky soil; not solid rock, but rocky soil? A. A drag line machine can be operated in seamy or loose material, where there is opportunity for the teeth to rip up the work in layers. It could not in solid rock. But if the work was blasted properly, a drag line bucket would enter into that kind of material and fill.

Q. It will operate in blasted rock? A. It will operate in blasted rock, and that is done with drag line buckets.

Q. A little while ago I spoke to you about the Paige shovel attachment, recently advertised in a Paige catalog. I hand you a copy of a Paige catalog and ask you to refer to one of the figures and explain briefly to the court the structure of this device?

Mr. Richey: Objection. That is immaterial. That is not prior art.

Mr. Corbett: No,—just illustrating what can be done with shovels, and the fact that the pivoted scoop is still a practical proposition.

Mr. Richey: What has that to do with this case?

Mr. Corbett: In your cross examination you made considerable of the fact that the Mahoney scoop was pivoted.

Mr. Richey: You say I did or I am going to?

Mr. Corbett: You have, in the depositions, if I am not mistaken.

Mr. Richey: I still object to it. There must be some limit to what we put in this case, it seems to me.

Mr. Corbett: It is not a prior art structure. Your Honor will see that. But it is an indication of what is and what is not practical; and considerable has been said

in the Cleveland case about fixed presentation, the importance of it.

The Court: Put it in in a few questions.

Mr. Corbett: I just wanted to explain it briefly, Your Honor.

The Court: You will want it for your record anyway.

(Question read.)

The Witness: The bucket shown on this device is equivalent to or exactly similar to the Paige drag line bucket, that is, the bucket made by the Paige Engineering Company, and the original drag line patents were taken out by a man by the name of Paige. Here a bucket of that kind, instead of being free, as they are usually, is carried out hoisted on one line, and the other, and is guided and held by the end of the handle.

Q. That is a back hoe device? A. It becomes a back stroke device. At the same time it is pivoted and is free to raise; that is, in coming through the work, pivoted here at the forward end, the back end may rise the same way it would in regular drag line work.

(Narrative continued.) As to my experience with various types of excavating machines and to what extent they will handle hard material and further as to the kind of materials they are usually designed to handle, I will say that in the use of any kind of excavating machinery, whenever the work or the material encountered will slow down the output of the machine, if the material is seamy, loose enough, there is no great retarding effect in output, and it is common practice to continue to operate the machine without blasting. Whenever the material becomes hard enough, it is considerably like the idea of stopping to undercut with the machine. The machine must be kept in its full capacity of output. Then shooting comes in. On the work without larger shovels we find that necessary. We could keep on and get out half as much, but if we did that it would cut the capacity down; there would be nothing left in the value of the material recovered; and we would also have very numerous breakages when we attempted to do that.

The Court: Breaking of the shovel?

The Witness: Breaking of the heavy frame parts that cannot be quickly repaired. One is never able to fully figure the loss until the end of the year, when it is

too late. We blast for that kind of work. Even blasting may be done and not be effective; it may be done poorly and not in a manner which would be of aid. Several of the larger companies are doing this work today and have built and operated their own explosive plants so that they do not take any chance on the poor effects of blasting.

The machines I have had charge of first came out 17 or 18 years ago on the market. They were very, very large and very strong. When I arrived down there on that work, I found, unfortunately, that information had gotten among the operators and the foremen that these machines were so large they could just dig anything. There was very indefinite and little shooting done. A check-up showed our trouble was instead of stopping that at once they were experimenting with the large machines. With the larger machines, those brought out in the last four years, there is no thought even with those machines that they will dig rock. The companies have put in their own explosive plants and produced liquid air to break this up.

The Court: Your point is that it is not practical because it is not economical?

The Witness: It is not practical because it is not economical.

The Court: All right.

Mr. Corbett: I would like to say, on behalf of the Osgood Company, I would like to reserve the right to place Mr. Turner back on the stand after the showing of this machine out there, if anything makes that necessary.

The Court: I see no objection to that.

Mr. Richey: There is no objection to that.

Direct Examination by Mr. Reed.

I am familiar with the machines of both defendants here. I have observed the General Excavator machine that is, the back-hoe in operation, digging and dumping. In the General Excavator machine I did not find anything either in appearance or purpose, which corresponded to the upright member or support 17 of the Clutter patent here in suit.

In the General Excavator machine with the back-hoe attachment I did not observe any interference between the ditcher stick and the link at the upper end in any range of normal work. The situation as to this is

practically the same as it was in connection with the Osgood machine. The difference between the link construction and arrangement of the General Excavator machine from the Osgood machine is that in the General Excavator machine instead of there being two of these links at the top like in the Osgood passing down on the outside there is only one link or bar which passes through the link coming down in a slot. I do not believe that the slot was intended to act as a stop or abutment in the manner similar to the stops or abutments 23 and 24 of the second Downie patent. The slot is cut out roughly, burned out, and the bottom of it is left square with the center line of the handle. If the bar came down and contacted with it, it would not contact with the flat surface for any considerable distance at all. It would be a corner contact. It would appear to me that if it was intended for that purpose it would have been cut out on the same angle at which the bar would take when it contacted, and it would seem obvious the bar would have been made wider by some method.

The Court: Does it perform the same functions?

A. Not in any normal working range, it does not contact.

(Narrative continued.) The relationship between the General Excavator and plaintiff's patented machine as to the length of the upper arm of the ditcher stick, is substantially the same as that between the Osgood and plaintiff's machine.

Mr. Reed: That will be all.

Mr. Mahoney: If Your Honor please, we want to reserve the right, before we close our case, to offer in evidence any of these charts. We will consider these charts and put them in evidence before our testimony closes.

The Court: I guess there is no objection to any of them.

Mr. Mahoney: We want to consider the shovels we may want to put in. We will let you know before we close our case.

The Court: All right.

Mr. Mahoney: I also want to offer in evidence this Paige Drag Shovel Circular.

The Court: I will just withhold my ruling on that.

Mr. Mahoney: We will offer that in evidence and Your Honor may make your ruling on it later.

Mr. Richey: I will note my objection to that.

Mr. Mahoney: In evidence as Defendant's Exhibit No. 63.

And at this time we want to offer in evidence certified copies of the file wrappers and contents of the patents of the plaintiffs in suit here; that is, the file wrapper and all of the papers referring to prosecution of the case in the Patent Office, certified by the Commissioner of Patents as correct and true copies.

The Court: Any objection, Mr. Richey?

Mr. Richey: No. How many of the patents in suit?

Mr. Mahoney: All that are sued upon.

Mr. Richey: I think we are going to withdraw two of the patents. Mr. Reed and I have been talking about it back and forth. We have pretty near reached an agreement about that. I shall be prepared in the morning to say.

The Court: You have not settled the rest of the case?

Mr. Richey: No.

Mr. Mahoney: And a certified copy of file wrapper of the Clutter Patent 1,317,431 is offered in evidence as Defendant's Exhibit 64.

A certified copy of the file wrapper and contents of the Robert Rex Downie Patent 1,511,114, dated October 7, 1924, is offered in evidence as Defendants' Exhibit 65.

A certified copy of the file wrapper and contents of Robert Rex Downie Patent 1,709,466, dated April 16, 1929, is hereby offered in evidence as Defendants' Exhibit 66.

A certified copy of the file wrapper and contents of Robert Rex Downie Patent 1,543,250, dated June 23, 1925, is hereby offered in evidence as Defendants' Exhibit 67.

The chart which was marked for identification as Defendants' Exhibit 61 during the plaintiff's case, but not offered in evidence, is now offered in evidence as Defendants' Exhibit 61.

The Court: Any objection, Mr. Richey.

Mr. Richey: Except it is immaterial; that is all.

The Court: Which one is that?

Mr. Mahoney: That was a sketch made of the machine at the demonstration, a pencil sketch.

The Court: All right. It is admitted.

Mr. Mahoney: That is all at this time I believe.

Cross Examination by Mr. Richey.

Q. Mr. Turner, you said, I believe, there were twenty-four prior patents in machines referred to in the answer which show the back hoe; I presume those you have picked out and discussed here you consider to be the pick of the twenty-four? A. I don't know whether they are or not.

Q. You regarded those that you have discussed as coming nearer to the Clutter machine than those you did not discuss, did you not? A. I think possibly, yes.

Q. Which of those you have discussed here—and that includes the patents and machines said to have been used—do you consider to be the most like the Clutter? A. I think the Downie would be most like the Clutter.

Q. I mean the prior art patents, of course; the Downie is not a prior art patent, is it? A. No, sir. The Rood would be one that would be, in the prior art.

Q. That is the one shown by Rood Patent 386,438, of 1888? A. The old Rood.

Q. Is the one, is it not? A. Yes, sir.

Q. This Paige machine you discussed here; have you ever seen one of those? A. No, sir.

Q. You have never seen one operate, of course? A. Never seen one operate.

Q. You do not know when it was brought out, do you? A. I don't know.

Q. It was within very recent years? A. I think so; I don't know that.

Q. You spoke of this South Carolina bone or rock. Have you ever seen any of those beds?

The Court: You mean phosphate?

Q. Yes. A. Not those beds; but I have seen phosphate.

Q. Where did you see phosphate? A. Commercial phosphate, I have seen it.

Q. You have seen it ground up for fertilizer? A. Seen it in bulk.

Q. You never saw any of it as it is deposited in South Carolina and Florida? A. No, sir.

Q. It is used for making fertilizer? A. Yes, sir.

Q. They grind it up and sell it for fertilizer? A. Yes, sir.

Q. Have you seen any of the recently made Osgood machines? A. I have.

(Narrative continued.) I don't know of any changes in those machines over the first machines with respect to the relation between the link and the upper end of the angle iron that runs along the stick which engages the link. I have seen more recent General machines. I do not know of any change in the relation between the link and the shoulder or edge on the stick that engages it, over the first General machine.

Q. You discussed several Mahoney machines here, one shown in the Mahoney patent, which one of those machines do you consider to be the nearest like the Clutter construction? A. I don't believe I understand your question.

(Question read.)

A. I only discussed one Mahoney.

Q. Did you not discuss Exhibit 4, the one in the cornfield? A. You mean individual machines?

Q. Yes? A. Oh, yes.

Q. Which one do you consider to be the nearest like Clutter, the one in the patent or the one in the cornfield? A. I don't think there is any great difference between them.

Q. One of them had a stick or spar on the back of the bucket that ran up alongside the ditcher stick? A. Yes, sir.

Q. That was the one in the cornfield? A. Yes, sir.

Q. You did not find that in the one in the patent, did you? A. No, sir, that is not in the patent.

Q. Having that difference in mind, if no other, which one do you consider to be nearest like the Clutter? A. The one in the patent.

Q. Which of the prior art patents or machines you have discussed here do you consider to be nearest like the machine in the Second Downie Patent? A. I don't know that I can select any one.

Q. You have mentioned Hoffmaier and two or three others. Can you select one of those? A. You mean in relation to the Second Downie Patent in relation to stops?

Q. Yes? A. The Hoffmaier would be one; but not with any particular stops.

Q. But you consider that to be the nearest like? A. There are no stops mentioned in that.

Q. But that is nearer like the stop feature of the Second Downie Patent than any of the other prior art patents you discussed, in your opinion? A. No, sir, I don't know that it would be; there are other machines in those prior art patents that had some limitations.

Q. My question is, which one do you consider to be nearest like the Downie? A. As far as stops are concerned, there are none of them have a stop like the Downie put some place to have that angularity. None of them have that.

Q. But there must be one better than the balance? A. In that relationship there would not be in that particular point.

Q. Will you look at this Chart 17, the drawing of the Mahoney? I notice you have changed the position of the parts with respect to the Mahoney patent, is that right? A. I don't know that that is right.

Q. In the Mahoney patent the bucket was on the ground, was it not?

The Court: You mean the patent office drawing?

Mr. Richey: Yes.

Q. You have raised the boom, have you not? A. Yes, sir, in relation to this.

Q. In relation to the drawing of the patent? A. Yes, sir.

Q. There is a slack shown in the green line, is there not? A. Yes, sir.

Q. And if that were shown correctly, the bottom would drop down to take up the slack, would it not? A. Yes, sir.

Q. And the only way you could then bring it to the position shown in this Chart 17 would be to pull on that green line? A. Raise the green line.

Q. That is, you control the direction of the mouth of the bucket at all times with the green line? A. It would be necessary in that, yes, to raise it with the green line.

Q. So that, in addition to performing the function of dumping, that green line also performs the function of directing the mouth of the bucket? A. It would.

Q. And if you wanted to change the direction of the mouth of the bucket at any time, you would have to pull on the green line? A. You would.

Q. The green line in this chart corresponds to the line 44 in the Mahoney patent, does it not? A. Yes, sir.

Q. That is, the green line in the chart is numbered 44 in the Mahoney patent? A. Not the green line.

Q. I beg your pardon—34? A. Yes, sir.

Q. That green line is run by power, is it not, that line 34? A. It is.

Q. And of course the other two lines there shown in the patent at 44 and 50 were also run by power? A. They were.

Q. What is the member C in the Rood Patent 386,434, do you know? A. The member C is a strut.

Q. Do you know what that is for? A. Yes, sir.

Q. What is it for? A. It was used to exert some holding down effect on the boom.

Q. To keep the boom from rising when they pulled the bucket through? A. That is my supposition. In this view I cannot see how it would hold there.

Q. In this view you cannot see? A. No, sir.

Q. In this Sweet Patent 120,830, there is a line 7 to 1, a line 84 and a line 87, all three of which are controlled by power, are they not? A. They are.

Q. In the King patent the boom is stationary as far as moving vertical is concerned, is it not? A. It is.

Q. And the bucket, the only way you could swing the bucket beyond vertical would be by a pendulum swing? A. It would.

Q. It operated by running the stick up and down at the end of the spars, did it not, and swinging it in? A. It was adjusted.

Q. How was that operated, whatever you chose to call it? A. This chain was carried around a sprocket here.

Q. And how was that adjusted or operated, whichever you call it? A. This chain is carried around the stroke here (indicating). That center on this shaft, the pinion engages the rack on the handle the same way as standard shovels, and that would just take and hold it in different positions. I beg pardon there—the first question is not fully answered. This is a brake mechanism; it is not a power mechanism.

Mr. Corbett: Give the number of that.

The Witness: It is marked Q, I think, and probably S; there are two there. Now, this chain would be driven around this by the oscillation of this; in other words, when you get here (indicating), it would reach

back and then if you care to brake, or if you get it when it was out here, the chain acts to hold it in this position, so it would pivot there, but in the other outstroke that is really a driving stroke.

(Narrative continued.) Now, by a standard machine, I mean an ordinary steam shovel. In similar mechanism, this would be totally different. In other words, it is just an ordinary steam shovel turned around as far as this part. The machine of the Webber patent works practically the same. As to whether that would apply to both Webber machines, that is, whether it would make any difference whether this boom was curved or angular I would say that wouldn't have anything to do with it. This is a brake attachment, the same as the other, using a rack and pinion to hold it, whichever way it was to run, and hold it there. As to whether it would have control beyond the triangle just the pendulum swing, I would say that after you had the pendulum swing and the bucket catches out here in the work, that would be closed the same way. The object is to make a full arc; the object is to hold it; after it has come back like this, if it is not held by brake, and it would come on hard material, instead of making an arc it would go up a horizontal line. If that was hard material, it would pull just like an arc shovel, to make it dig in. Referring to this Exhibit 34, the link engages the upper corner of the boom, that is, the engagement is not between the ditcher stick and the link but between the link and the boom.

The Court: That is defendants' 34?

Mr. Richey: Yes.

(Narrative continued.) That is the same construction in this chart 42. Referring to the second Downie patent the functions of these abutments would be the same if the abutments were made all in one piece, that is all through the operation I mean, the relative location in there. The same thing would be true of the abutments on the stick. The function would be the same whether integral or separate.

In this Mahoney cornfield machine there is a hand tripping line in addition to the three power lines. I don't think in the machines of the Clutter and Downie patents that the trip line would be operated at all where the material was dumped through the mouth of the scoop, and there would be only two power lines to operate.

The Court: You mean when you didn't use the drop bottom?

Mr. Richey: Yes, sir, or don't trip the Clutter bucket.

(Narrative continued.) The only time you have to operate the trip lines is after the scoop is placed; then a man just pulls the trip line, that would be their idea. In both the drop bottom and the Clutter machine that would be the practice.

Q. You spoke of the cross link 17 in the Clutter patent. Do you find that that link is recited in claim 4 of the Clutter patent as you read claim 4? A. You say a cross link?

Q. Yes, this one here, 17? A. I think it was called a support.

Q. All right, whatever you want to call it, shown as 17 in the Clutter patent? A. Will you let me have your question again?

Mr. Corbett: I don't think it is the purpose of this witness here to ask as interpreter of a claim; that is the function of the court.

(Last question read.)

A. It would be.

Q. You find it in there, do you? A. Yes.

Q. And you consider that any machine that didn't have that support, then, would not be described by that claim and would not infringe it; that is your notion of it, is it?

Mr. Corbett: Your Honor, I object to that; that is what constitutes an infringement of the patent claim.

The Court: Well, he is an expert. Take his answer for what it is worth.

Mr. Corbett: Exception.

(Last question read upon request of witness.)

A. I don't know as I get that yet.

Q. You don't understand the question, do you?

(Question again read.)

A. I should think that would be it.

(Narrative continued.) In the Osgood and General machines, the tripping line is used only when a load is to be dumped through the bottom. And that is only operated after the scoop is placed then a man just pulls on the line. During the other operations of the Osgood and

General machines the bucket is rigid on the stick, that is connected rigidly. When they dump through the mouth they do not need to use the tripping line.

Q. Referring to this chart 60, and to the illustration of the Osgood machine shown therein, if the scoop was pulled in towards the boom, the top of this angle iron on the stick would engage the link, wouldn't it? A. If it was pulled in far enough, it would, yes.

Q. And when it did that, it would cause the link to get out of line with the hoisting line, wouldn't it? A. It would, if it reached that position.

Mr. Corbett: I want to say, Your Honor, that that is not a chart of the Osgood machine; not made to scale at all.

The Witness: It is not true to scale of the Osgood machine; it was just made to show this brake line.

Q. Well, the principle would be the same? A. The principle is the same.

Q. Only a matter of degree? A. Yes, sir.

Q. Only a matter of this particular line of the angle iron engaging the link with this angle of the boom or stick 35 or 40 or other degrees? A. In the making of that there was no attempt to show where this line would go.

Q. Well, as I say, it is merely a matter of how big the angle is here between the stick and the boom before these parts engage; I mean by these parts, the upper part of the angle iron and the link? A. Well, in this sketch, just taking the sketch, without regard to scale position, it would strike the boom instead of the channel you are talking about.

Q. I mean, when you pull the scoop in toward the boom? A. When you pull in, the boom would remain where it is and the shovel would travel here and get further away, and the bar would strike on the boom just as we had it in the other.

Q. Well, in that way it differs from the Osgood machine? A. Yes, it differs.

(Narrative continued.) In speaking of the difference in power that you could apply in the case of what they call the whirlie, that is, a machine that turns clear around, and that in which you swing the boom 180 degrees, that difference in power is a matter of degree of the power. In one you can apply more power than in the other. Of course, if you can wind the thing around more,

you can apply more power to the thing than if you wind it around less. I never operated these Keystone ditching machines involved in this case. I have not operated any of the machines any more than just a few strokes when directing runners or operators, the pit man, as to how they should use a machine, and why it should be done this way or that way. The machine I am talking about is a large shovel, out-stroke shovel, and also the drag line, the in-stroke; that is, in relation to the drag line, that construction. A great many times on them. I have not operated any of these ditchers at all. I have seen the Osgood and General operate and have seen a great many of others operate at different times; been watching them as long as they have been out; whenever I would see them I would drop in on these things; I would take notice of them. As to my experience with patents I never prepared any patent applications, but had them prepared by attorneys and checked them with my attorneys. I never undertook to prepare any patents myself, I leave that to the attorney. I have taken out a good many patents myself.

Mr. Richey: That is all.

RE-DIRECT EXAMINATION by Mr. Corbett.

Q. You spoke, in discussing the Mahoney device, the device of the machine as it is operated in the cornfield as shown in Defendants' Exhibit 4, as having a tripping line operated by power. Will you explain just how that was done? A. That tripping line was pulled over a wench, that is, a wench is a drum on a wind, and when you take two or three turns around the drum, you could draw on the bite or free end a trifle perhaps up. My understanding is that that is the way that was done with that machine.

Q. And the wench merely is incidentally operated in response to a snubbing of that line around it by the man on the ground; is that right? A. It is.

Q. I was not quite clear on the question put to you about the number of operating lines on the Mahoney device. I wish you would state just how many operating lines there are on the Mahoney device there were, in comparison with the device of the Clutter patent, ignoring the line for tripping the bucket and the lines for swinging the boom and stick. Just how many lines, operating lines, were there? A. There were two.

Q. Two in the Mahoney device? A. Two in the Mahoney device.

Q. And how many in the Clutter device? A. Two.

Q. Now, I direct your attention to the patent to Mahoney and particularly to the linkage at the top of the ditcher stick. That linkage is designated 42, is it not? A. Yes, it is.

Q. And it is shown across the hatch in arms; is that right? A. That is right.

The Court: You are not referring to these various exhibits now, Mr. Corbett, if you want to get that into the record.

Mr. Corbett: This is a copy of the Mahoney patent, is all; just an enlargement of it.

The Court: All right.

Q. That linkage 42 carries a sheave, does it not? A. It does.

Q. And I call your attention to the Clutter patent No. 1,317,431, and particularly to the link or links 19 of that patent. That link is connected to the upper end of the ditcher stick in the Clutter device, is it not? A. It is.

Q. And it assists—at least assists in carrying the sheave; does it not? A. It does.

Q. Referring to the patent to E. O. Rood, No. 386,438, and particularly to the connection of the cable or line 16 with the upper end of the ditcher stick, do you find a link carrying a sheave? A. No.

Q. Then in that respect you would say, would you not, or would you say that the patent to Mahoney, or the structure of the patent to Mahoney is more similar to the structure of Clutter than the Rood device? A. In that detail it would be.

Q. In this E. O. Rood device, as shown in patent 386,438, mention was made of a spar or strut C. Have you any knowledge as to whether or not this device was ever used without that strut? A. I have.

Mr. Richey: Now, is that your own knowledge, or just what somebody told you?

The Witness: No, sir; I never saw the spar on any of these machines, and I saw them a great number of times through the years in that line of work.

Q. You saw it operate without the strut? A. Yes. I never saw it operate with the spars or strut.

Mr. Corbett: That is all, Your Honor.

RE-CROSS EXAMINATION by Mr. Richey.

Q. When they left off the spar C of the Rood machine, they put on a bottom line and a slope rope, didn't they? A. In some of the machines, along earlier in the period of these people, they did.

Q. Well, I mean in the machines of the type shown in this patent here? A. Yes.

Q. They left the spar off and put on a slope rope and a bottom line on? A. That didn't function necessarily for holding it down. It created or set the slope of that bank.

Q. A slope rope? A. Yes.

Q. And the bottom line would be without it? A. Well, these slope ropes could be hooked on to different angles, and then when it came to that shown, they could get the position to get slope.

Q. They also made other changes in the machine, did they not? A. These machines were built by the owners for their use, and I imagine there was more or less changing; I think they did make some changes as they went along, especially in the larger machines. Each time they built one they would make some slight change, something that would be longer or shorter, or something of that sort, because they didn't build them to sell as a manufacturing proposition—not a great many of them.

Q. Now, you have seen this Mahoney machine in Exhibit 5, haven't you? A. I have seen the Exhibit 5.

Q. That is different from both the Mahoney machine of the patent and from that in Exhibit 4, isn't it? A. It is some, yes.

Q. Which of the three do you consider to be nearest like Clutter's; that is, which of the three Mahoney machines, the one in the patent or in this Exhibit 5 or Exhibit 4? A. I don't know as there is any material difference between the one of the patent and this, in relation to the Clutter machine. I don't know as I would make a choice.

Q. But in Exhibit 5, the hauling line is connected off of the connection between the scoop and the handle, and in the patent they are both on the same point? A. Oh, yes, but practically none of them made like that.

Q. Like what? A. No machines built like that.

Q. That is the one you think is impractical? A. Yes; they make the patent view like that, and put the pulling line on, but when they build it, they put it where they have to have it. After they attempted to use it the

first time, the way it would pull, they would take it off here and put it down here (indicating). A great many of these patent plans have just those kind of things in them.

Q. Then you think as a matter of fact that Exhibit 5 is better than the machine shown in the Mahoney patent? A. Well, my thought was it was better than the other photograph before some slight change.

Q. That is, Exhibit 4? A. Yes, Exhibit 4. I was not comparing it with the patents, particularly. It has been altered some over the first one, this Exhibit, after it was taken.

Q. You said something about part of the power of the hoisting line in the Clutter patent being diverted to the boom through the cross link 17. The major portion, however, would go on to the stick, wouldn't it? A. No, I don't know as the major portion would. It would be a considerable amount of it carried here.

Q. Well, there would be enough to operate the stick? A. It would operate it but not nearly so far out. It shows it in the operating position there now, I believe.

Q. But the difference in the power that is conveyed through the link on the Clutter machine and in the machine of the defendants would be a matter of amount of power, wouldn't it? A. Let's have that question again.

Q. Well, consider the power applied by the hoisting line. The difference between the amount of power applied to the ditcher stick in the Clutter machine and that applied in the defendants' machines and the other machines where the cross link is omitted, would be just a matter of amount, wouldn't it, matter of degree? A. Well, yes, of degree. It would be a considerable amount.

Q. One would get more power than the other? A. Would be greater.

Mr. Richey: That is all,

Re-Direct Examination by Mr. Corbett.

Q. In the operation of this LeRoy Clutter structure as shown in patent 1,317,431, would there ever be a time in which the raising of the boom by the hoisting line would result in exerting the power almost exclusively upon the boom, or would it always be divided, or equally divided? A. No, it would change. When the boom got higher up, there would be less on the outer end.

Q. That is, on the outer end of what? A. Of these links.

Q. Well, read the numbers. A. On the handle 1, through the links 19.

Q. In other words, as the boom got higher up, there would be less pull on the links 19; that is, less pull on the upper end of the ditcher stick; is that right? A. There would be some less, yes.

Mr. Corbett: That is all, Your Honor.

Mr. Richey: That is all.

Mr. Corbett: We have some depositions to read in connection with the Bernard Clutter development. Do you want us to start that now?

The Court: You might as well get that over with.

Mr. Corbett: All right.

The Court: You can't summarize them, can you?

Mr. Corbett: Well, I think we can summarize some of it, but we would like to get a true picture of it with at least two or three of them. Mr. Mahoney has been going over it some, trying to cut out what we could.

The Court: All right, you present it in your own way.

(Adjournment to 9:30 a.m., March 11, 1931.)

(March 11, 1931, 9:30 a.m. hearing resumed.)

Mr. Corbett: Your Honor, I want to say that we have our machine on that Sam Davis coal yard lot, and would like to know what time it would be agreeable to you to look at it. Would you care to look at it today?

The Court: I think it would be a good plan to adjourn about 11:30 and go there, like we did before, leave here at twelve o'clock. Will we have enough time that way?

Mr. Corbett: I think so. We will not have a protracted demonstration, but we want to show it to you.

The Court: Is that satisfactory to you, Mr. Richey?

Mr. Richey: Yes, sir.

Mr. Mahoney: The deposition of Bernard R. Clutter—

The Court: Now this relates to what?

Mr. Mahoney: This relates to the first Downie patent. The drop bottom development.

The Court: And this is the matter with reference to which you claim fraud or non-disclosure or something of that kind?

Mr. Corbett: That is right. But we are going into the patent angle of that thing first, and show Your Honor the similarity of the devices.

The Court: All right.

DEPOSITION FOR THE DEFENDANTS

Taken at Lakewood, New Jersey.

NOTICE OF TAKING TESTIMONY.

MR. PHILIP E. SIGGERS,
918 F Street, N. W.,
Washington, D. C.

MESSRS. RICHEY & WATTS,
1030 Union Trust Building,
Cleveland, Ohio.

Attorneys for Plaintiff:

Please take notice that the defendant herein will take the testimony of Bernard R. Clutter, 17 Edgewood Court, Lakewood, New Jersey, who resides more than one hundred (100) miles from the place of trial herein, for use on behalf of the defendant at the final hearing of this cause, before Helen R. Grove, a Notary Public in and for the County of Ocean, New Jersey, who is not of counsel nor interested in this cause, at the office of Helen R. Grove, 125 Clifton Avenue, Lakewood, New Jersey, on the 24th day of February, 1930, at ten o'clock a.m., and thereafter from day to day as the taking of the deposition may be adjourned; and such testimony will be taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross-examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated at Columbus, Ohio, this 19th day of February, 1930.

Service acknowledged February 20, 1930.

RICHEY & WATTS.

PRINTER'S NOTE:

A like Notice was issued in behalf of the General Excavator Company and was signed by Mr. Edward L. Reed.

The following deposition was taken on behalf of both defendants, pursuant to the above notice, at the office of Helen R. Grove, a notary public, 125 Clifton Avenue, Lakewood, New Jersey, commencing at ten o'clock a.m., on the 24th day of February, 1930. Counsel for all parties being present.

BERNARD R. CLUTTER, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Bernard R. Clutter. I reside at Lakewood, New Jersey. At the present time I am with the Consolidated Production Corporation, doing road work. I am foreman with this company. I am forty-eight years old, will be forty-nine this year. I am testifying under subpoenas in these cases. I haven't absolutely any interest in these cases. I am a brother to LeRoy P. Clutter, patentee of United States Letters Patent 1,317,431.

Mr. Mahoney: The United States Letters Patent, 1,317,431 referred to in the answers to Q. 8 and Q. 9 is hereby offered in evidence as Defendant's Exhibit No. 24, and the Notary is requested to mark the same "Defendant's Exhibit No. 24, United States Letters Patent No. 1,317,431, dated September 30, 1919."

(Narrative continued.) I have been employed by the Keystone Driller Company of Beaver Falls, Pennsylvania, plaintiff in these cases. My recollection is that I was first employed by this company in the latter part of 1913 or the early part of 1914. I was employed by them as a Keystone excavator demonstrator. I actually operated these shovels on the job. When I was not on the road demonstrating I was employed in the shop, only slightly in the erecting department in consultation with the chief engineer in regard to changes or improvements of machines. Some of the changes or improvements suggested by me were incorporated in Keystone machines while I was employed there. I do not remember the nature of the changes or improvements that were made while I was employed there but in a general way number 6 Keystone excavator was designed principally on my suggestion except side braces and the circle. This machine was a double cylinder steam machine with steel frame. This machine was made in accordance with the LeRoy P. Clutter patent 1,317,431, so far as the boom, ditcher stick and scoop mechanism was concerned. The designing work which I referred to as having made on this machine related chiefly to the power plant, and the body of the machine. I worked for the Keystone Driller Company demonstrating from the main plant at Beaver Falls, Pennsylvania, approximately two years to my rec-

ollection. The next position I held with the Keystone Driller Company was salesman and demonstrator. First in the factory territory, in fact covering a large part of the United States. Later, I was transferred to Carthage, Missouri. The Keystone Driller Company has a branch plant at Carthage, Missouri. Mr. Frank Oliver had charge of the branch plant of the Keystone Driller Company at Carthage, Missouri. When I was transferred to Carthage, Missouri, I was selling and demonstrating shovels and excavators, in the central western territory, and occasionally back in factory territory.

The Keystone Driller Company's branch plant was removed from Carthage, Missouri, to Joplin, Missouri, in 1916 or 1917. I was instrumental in getting the branch plant of the Keystone Driller Company from Carthage to Joplin by securing the location for the plant of what was known as the bridge plant at Joplin, Missouri. This was a large steel structure, approximately a hundred and fifty feet by three hundred feet, not complete at the time of purchase. The bridge plant came to be for sale because that bridge company had gone bankrupt and the plant was not in use. I had opposition in getting the Keystone people to take over the bridge plant at Joplin, Missouri. This opposition came from R. M. Downie and Frederick W. Ransom. After they had purchased another site, I finally got them to take the bridge plant in preference to the site that had been selected. I urged them to call a meeting of their directors and appoint a committee to come to Joplin and investigate the whole proposition, also insisted that they appoint R. M. Downie as one of the committee. I was informed that they had complied with my request and that Mr. Downie and I believe Mr. Warren was appointed to come to Joplin, which they did. Mr. Oliver wired me I believe at Dallas to come in to the branch for the conference. The result of this conference was that the property formerly purchased was traded in on the bridge property. I believe this turned out to be a good investment for the Keystone Driller Company, because from the information from the Joplin office the total cost of the building when completed was a little less than thirty-nine thousand dollars and that later the Keystone Driller Company were made a proposition from O'Brien of Pittsburgh, Kansas, to purchase that plant for a hundred and twenty-five thousand. R. M. Downie was the general manager of the Keystone Driller Company, Frederick W. Ransom acted as as-

sistant manager for the company. My recollection is that I worked five or six years for the Keystone Driller Company. I left their employ and went in the business for myself. I did not have any other reason for leaving their employ, except that we could sell machines, but we could not get them from the factory to supply the demand. This was partly on account of the war. I did not have any disagreements of any kind with the Keystone Driller Company at the time I left there. They were very friendly. As an indication of their friendliness towards me I received a letter from Mr. Ransom expressing his regret that conditions were such that I felt I should withdraw from the company's services at that time. He also expressed the hope that conditions would readjust themselves, in the near future so that they would see me back in service.

After I left the employ of the Keystone Driller Company in the year 1918, I opened up a coal stripping plant near Inglevale, Kansas. I engaged in that business until I went broke. The next business I engaged in was working for a mining company in Joplin, Missouri. I forgot what they called the company, but the men who were in charge of the work were Wallowers. They were brothers. The older brother's name was Frank C. Wallower, and the younger brother's name was Herbert H. Wallower. I operated shovels and it was my duty to oversee two shovels. They had Keystone shovels. On the mine work we used skimmer scoops on these Keystone shovels. We may have used one ditcher scoop. No ditcher scoops were used on mine work. I operated these shovels for Wallower brothers on other types of excavation besides mine work. I excavated a basement job for Wallower brothers in Joplin, Missouri. This was the Joplin Supply Company building basement. This was a large basement. I do not remember how much ground this took up in Joplin but it was probably several thousand yards. My recollection is that it was about one-third of a business block. I actually operated the Keystone shovel on this particular job. The Keystone shovel that I operated on the Joplin Supply Company basement for Wallower brothers was an instroke ditching machine. This was of the type like that shown in Clutter patent 1,317,431, Defendant's Exhibit No. 24. I had difficulty with the pivoted scoop on this Keystone instroke ditcher on this Joplin Supply Company job, and this difficulty was principally the spilling of material over the sides of the

wagons. This spilling over the sides of the wagons was caused by the pitching forward of the scoop when dumped, and was caused by the cable hook-up. The reason for this is that when the scoop is tripped it has a tendency to pitch forward. This is caused principally by the strain of the cables on the attachment. I discussed this matter with my employers Wallower brothers and told them how we could remedy the situation. I suggested that we take a skimmer scoop and make it rigid, and dump the bottom. Wallower brothers authorized me to explain this to the Keystone Driller Company of Joplin, Missouri, and tell them just what I wanted. I explained to the Keystone Driller Company how I wanted this skimmer scoop mounted.

Q. I now hand you United States Letters Patent No. 1,107,899 dated August 18, 1914, and ask you when you refer to skimmer scoop if you mean the type of scoop which is shown in Figure 1 of the drawings of this patent? A. Yes.

Mr. Mahoney: The patent which has just been submitted to the witness is hereby offered in evidence and the Notary is requested to mark the same "Defendant's Exhibit No. 25, United States Letters Patent 1,107,899, dated August 18, 1914."

The Court: You say this has a drop bottom on it?

Mr. Mahoney: Yes, Your Honor. I can show you here.

The Court: I see.

(Mr. Mahoney continues reading.)

(Narrative continued.) I issued instructions as to how I wanted the skimmer scoop shown in Defendant's Exhibit 25 mounted on the Keystone in-stroke ditching machine. I ordered the brackets or carrying rack which supports the skimmer scoop removed, and holes drilled in skimmer scoop so that it could be attached to the ditcher stick same as ditcher scoop No. 3 on Patent 1,317,431. To attach the rear wall of the skimmer scoop to the ditcher stick, I used the same attachment that was made for the regular ditcher scoop No. 3. That is, I used the same bracket No. 2 that had been used to connect the old pitch scoop as shown in Clutter patent 1,317,431. The other changes that were made in the skimmer scoop to mount it on the in-stroke ditching machine were as follows: The straps which support the old type ditcher

scoop were fastened to the front of the scoop as on ditcher scoop No. 3 of patent 1,317,431.

In Clutter patent 1,107,899, the mouth of the skimmer scoop is directed so as to dig away from the machine when it is being used as a skimmer scoop. But after the skimmer scoop was placed on the in-stroke ditching machine it was pulled towards the machine in digging the same as the ditcher scoop No. 3 on patent No. 1,317,431. There was a pulling member attached to the skimmer scoop for pulling it towards the machine when used on the in-stroke ditching machine. This pulling member was attached to a ba.. attached to the skimmer scoop in the same manner as the ditcher scoop No. 3 on patent 1,317,431. The skimmer scoop that I instructed to be mounted on the in-stroke ditching machine, my recollection is that it was one of the scoops purchased by Wallower brothers when they bought their machine from the Keystone Driller Company. However, that matter is not entirely clear in my mind as to whether Mr. Wallower purchased an additiona. scoop for this purpose or not. When I wanted the skimmer scoop prepared for mounting on the in-stroke ditching machine I went to the Joplin branch of the Keystone Driller Company, and told them what I wanted to have done so as to mount the skimmer scoop in the in-stroke ditching machine. They said that I wouldn't be able to close the door on the bucket. I believe one of the Wallowers was with me at the time. Mr. Wallower instructed the Keystone Driller Company to follow my directions saying to the Keystone people that "if Clutter said it would work he was willing to take a chance." They then made the changes that I required. The skimmer scoop was actually mounted on the in-stroke ditching machine for use on the Joplin Supply Company job. When mounted on this machine the skimmer scoop had a drop bottom thereon, pivoted at the side walls of the scoop like that shown in Clutter patent 1,107,899, Defendant's Exhibit No. 25, at the front end of the scoop. When the skimmer scoop was applied to the in-stroke ditching machine, it operated so that the bottom dropped when dumping.

The skimmer scoop shown in Clutter patent 1,107,899 was rigidly attached to the ditcher stick of the in-stroke ditching machine. It was made rigid, first by a wedge under the latched hook spring No. 13, of Patent 1,317,431. This did not prove satisfactory, and later we

took the latch hook off and used a block under pin No. 5, which formerly was movable, through a slot No. 16a, between guide 6 and scoop carrying member 1. The bottom of the plank or lower part of the plank rested on the bottom of the slot. The upper end bracing pin No. 5, against the upper end of the slot. This prevented the bucket from pivoting, and held it rigid when actually used. I actually operated this Keystone in-stroke ditcher with this drop bottom skimmer scoop thereon, rigidly held on the in-stroke ditcher stick at Joplin, Missouri, on the Joplin Supply Company excavation. I did not have much further trouble with the drop bottom scoop spilling any of the dirt over the sides of the wagons. As to closing the bottom of the drop bottom scoop in this in-stroke ditching machine, I had a little trouble at first but nothing to speak of. It was only a question of how to swing the bucket and slap the bottom shut. It was first attempted by using two men with a pole running under the boom which crept up and pulled the bottom shut. I was not operating the machine when this was being tried. There was another operator on the machine when I got to the machine at the start, and they were closing the bottom with a pole, handled by two men. I took over the operation of the machine when I got to the place where they were operating it. I closed the drop bottom by the motion of the boom and ditcher stick, and swinging the bottom shut. In other words, I flipped the bottom shut until it latched. The latch used on this drop bottom was the same type latch hook that was used on the skimmer type bucket. This sort of latch was not satisfactory. We had to keep a man on the opposite side of the wagon from the machine to pull the latch hook. That is, for dumping. It was not much of a job to improve it so it could be dumped from the machine. We used the old type brace bars and the pivoted bracket that had been on the old pivot type scoop when we made the change to the skimmer scoop first because we had them. It made a quick and easy manner to hook up the scoop for a trial. Also more economical for the try-out. Second, because if the scoop did not work practical as a drop bottom, we thought we could use it as a pitch scoop if necessary.

We continued to use this rigid drop bottom scoop on this in-stroke ditcher for the remainder of the job. I would say that period was possibly a month or so. The machine finished the job with this drop bottom rigidly connected scoop thereon. There were no other machines

on this job. As to the date that I used this rigidly connected drop bottom scoop on this in-stroke ditcher at Joplin, Missouri, on the Joplin Supply Company excavation, my recollection is that it was the early part of 1920. I do not remember how early it was first used. It was during the winter, that is during the winter of 1919 and 1920. I remember that Mr. Oliver, Mr. Culbertson, Mr. Blosser, Mr. Hazen and a number of other employees of the Keystone branch at Joplin, Missouri, saw this machine operate with this drop bottom rigid scoop on the in-stroke ditcher. My recollection is that Mr. Ransom was there, he was not from the Joplin branch—he was from the factory, and was assistant manager.

These men told me they thought this drop bottom rigidly connected scoop on the in-stroke ditcher was quite an improvement over the pitch bottom scoop in dumping into wagons. I think some of the employees of the Keystone branch at Joplin were down there every day to see this machine operate as I had improved it. The nature of the work that the Keystone company did to change over this skimmer scoop for use on the instroke machine, was to detach the brackets or carrying frame of the skimmer scoop, and drilled holes, and attached the connections from the ditcher type No. 3 of patent 1,317,431 practically as attached to the ditcher type scoop that we discarded.

I never applied for a patent on this combination of drop bottom rigidly connected scoop to an instroke ditcher stick. I intended to apply for a patent on this arrangement, but changed my mind when I was informed that Mr. Downie had been working on the drop bottom scoop, and had taken out a patent prior to the time I had gotten up this scoop. This information was given me by Mr. Oliver some little time after we had used the scoop on this machine. In a conversation I informed Mr. Oliver I was going to apply for a patent. And he informed me that the office didn't know anything about it, but that Mr. Downie had been working on or worked up a drop bottom scoop, prior to this operation, and was filing a patent on it, or taking out a patent. He said that that office didn't know anything about that. This conversation with Oliver took place in the early part of the summer of 1920.

Q. Was the Keystone Driller Company putting out any machines of the instroke ditcher type in the year 1920 that had a drop bottom bucket? A. I don't know.

Q. Did you ever hear of any being put out by them prior to your talk with Oliver in the summer of 1920? A. No.

Q. If any such machine was being manufactured, Oliver would have known about it. Is that correct? A. I don't know about that.

Q. When did you first find out that the Keystone Driller Company were using an instroke ditcher having a rigidly attached drop bottom scoop on their machine? A. I am not sure when I first knew about that.

Q. Was it after the summer of 1920?

Mr. Edgerton: Objected to as leading.

A. Yes.

Q. You had taken Oliver's word in this matter. Is that correct? A. Yes.

Q. Did you later find out that Mr. Downie did not file an application on this combination of an instroke ditcher machine with a drop bottom bucket until June 27, 1921? A. Yes.

Q. What became of the machine that was used on this Joplin Supply Company job having the drop bottom rigidly connected scoop? A. I could not answer that.

Q. Do Wallower Brothers still have the machine? A. No.

Q. Do you know what they did with it? A. They sold the two machines.

(Narrative continued.) I do not know if the drop bottom rigidly connected scoop was attached to the instroke ditcher when it was sold, I am not sure about that. They sold two of their machines—one went to Oklahoma, and fell down on the demonstration. I was called from Caney, Kansas, to go down to Oklahoma and see if I could put the demonstration over. This I did, and got the machine accepted, but do not know whether it was the same machine that was used on the Joplin work with the rigid type drop bottom scoop, or the other machine that was not equipped in this manner. The attachments used at Joplin were not with this machine at the time I demonstrated it. In other words, the machine that I was sent down to Oklahoma to demonstrate was not intended to operate as an instroke drop bottom ditcher scoop. I don't know what became of the machine that had the instroke scoop with the drop bottom thereon.

After I finished the Joplin Supply Company job at Joplin, Missouri, I took a sub-contract from R. L.

Plunkett of Coffeyville, Kansas, loading cinders on railroad cars for the Missouri Pacific Railroad Company at Cadey, Kansas. After this Coffeyville, Kansas, job I went to Trinidad, in the British West India Islands. The reason I came to go down there was that I received a wire from the Keystone Driller Company at Beaver Falls, Pa., that they had sold some machines through the Tidal Engineering Corporation to the Trinidad government. They asked me if I would consider a proposition to go down there and install the machines. Their first proposition was not accepted, but I made them a proposition which they forwarded on, through the Tidal Engineering Corporation, to the Trinidad government, that was accepted. I actually went down there. The work I was supposed to do down there was to erect and get the machines in operation. The work that I did was to take charge of field work. The Keystone Driller Company sent one machine down there. I was offered this job during the summer of 1920—I don't remember what month I went, or what part of the summer. As soon as my proposition was accepted I came east for the purpose of going to Trinidad immediately, but on account of the machines not being loaded on the boat, I did not leave for some little time. While I was waiting, I demonstrated a machine for the Keystone company at Barberton, Ohio. I don't remember how long a period it was from the summer of 1920 before I actually left for Trinidad, it was during the hot part of the summer, I don't remember what the date was. I have the passport. I don't remember what the attachments were on the machine I demonstrated for the Keystone at Barberton, Ohio. The type of the machine that was used at Trinidad and which was sent down there by the Keystone company was a pitch bottom. That is the type shown in Clutter patent 1,317,431. I was in Trinidad until the early part of the summer of the year 1921. I have not worked for the Keystone Driller Company since I came back from Trinidad in 1921, I did go up to North Dighton, Mass., for the purpose of demonstrating a machine, but on account of the boiler not being in compliance with the Massachusetts State laws, we were not able to demonstrate this machine.

I first conceived the idea of using a rigid drop bottom bucket on an instroke ditching machine, about 1916. I did not put this idea into use at that time, because the opportunity was not favorable. I was working for the

Keystone Company and the patent laws as I understood them were such that the company that you were working for held certain rights over inventions gotten up, or was entitled to rights in it. I was not as versed in patent laws. I felt that the opportunity would favor some time that I could get it up and try it out. I have a blue print showing the manner in which I attached the drop bottom skimmer scoop to the instroke ditching machine. I haven't got it on my person, it's out in the car. I will go out and get it. (Witness produces blue print.)

The Court: This is the blue print from which the shovel was made; is that it?

Mr. Mahoney: That is from recollection. The blue print was made to illustrate.

Mr. Edgerton: That is a present day recollection.

Mr. Corbett: That was made subsequently to show what they did with it.

(Mr. Mahoney continues reading deposition.)

Q. Does this blue print which you have just produced show the manner in which you connected the drop bottom skimmer scoop and rigidly attached it to the instroke Keystone ditching machine on the Joplin Supply Company job at Joplin, Missouri, in the winter of 1919 and 1920? A. Yes.

Q. When was the drawing made from which this blue print was taken? A. In 1929.

Q. Did the Herbert H. Wallower mentioned in this blue print cooperate with you in the designing of the machine? A. Yes, he did.

Mr. Mahoney: The blue print which has just been produced by the witness is hereby offered in evidence and the Notary is requested to mark the same "Defendant's Exhibit 26, sketch of drop bottom skimmer scoop attached to Keystone instroke ditching machine and used on the Joplin Supply Company basement excavation at Joplin, Missouri, winter of 1919 and 1920."

Mr. Edgerton: The Exhibit 26 is objected to as secondary evidence and is further objected to as being insufficiently proven.

(Narrative continued.) The Keystone Driller Company wrote me a letter in which they referred to the drop bottom rigidly attached skimmer scoop used by me in Joplin in the winter of 1919 and 1920. I hereby produce

that letter. This letter was received by me through the regular course of business through the mail.

Mr. Mahoney: The letter which has just been produced by the witness is hereby offered in evidence and the Notary is requested to mark the same "Defendant's Exhibit No. 27, original letter on Keystone Driller Company's stationery, dated February 20th, 1926, addressed to B. R. Clutter, Lakewood, N. J., and signed Rex Downie."

Cross Examination by Mr. Edgerton.

Referring to Defendant's Exhibit 26, I did not make this drawing. The drawing which I testified was made in 1929 is in accordance with our recollection of what we used at Joplin, and just how we applied it. As to your observation that some of the details are incomplete in this drawing, for instance, the structure of the latch, my recollection is we increased the length of the latch bar, but intended to make further changes. I don't believe I remember just exactly what we used as a latch.

Q. I observe further that the heads of the bolts supporting the bail and scoop support are not shown. Also the head of the bolt for the scoop bottom. Would not those bolt heads extend on the outer sides of the scoop support and the bail respectively? A. I am not positive whether we used bolts or rivets for the hinge joints.

Q. You have testified, I believe, that you used the skimmer as manufactured by the Keystone Company. Do you remember whether or not the skimmer bucket had the bolts or rivets? A. I do not.

Q. What sort of material were you working in on the Joplin job you have previously referred to? A. Earth excavations.

Q. By earth excavations do you mean it was free from boulders, rocks and stones? A. No.

Q. Well, then, will you please state more specifically what you do mean by earth excavations. A. The material being excavated was principally of earth, some loose boulders and some small amount of solid rock in the bottom.

Q. Did you use the apparatus illustrated in Defendant's Exhibit 26 to dig the solid rock you have referred to? A. No, sir, you cannot dig the solid rock, the kind of rock we had there had to be blasted, as it was more of a flint rock.

Q. Did you use this device for digging trenches? A. We did not; we used it as a pull, or ditcher scoop on basement work. I believe to answer that correctly I should bring out the point that to cut the sides of the basement straight and perpendicular it is necessary to cut a trench ahead of the main excavation. This we did.

Q. Then the material you encountered in this excavation at Joplin was of such a character that you could pull the bucket through the same notwithstanding the side protuberances such as the various pivot bolts and supports formed? A. There was no noticeable interference from these protuberances. Exhibit 26 correctly represents the principles used, and may be slightly in error as to details, as it was based upon our recollection of what was used.

Q. In other words, this drawing illustrates the principle but is not a faithful representation of the structure. Is that correct? A. Of the details.

Q. After you completed the excavation on the Joplin Supply Company's basement, you abandoned further experimentation on this device, did you not? A. Yes, sir, I did not go any further into the experiments at that time.

Q. And as a matter of fact, you consider the work you did on this scoop as shown in Defendant's Exhibit 26 an abandoned experiment?

Mr. Mahoney: The question is objected to on the ground that it has not been shown that the witness understands the legal meaning of the term "abandoned experiment."

A. I did not do any more work on the drop bottom scoop after that time.

Q. And did you feel that this was because of the extreme care required to make the device as a whole operative?

Mr. Mahoney: Objected to on the ground that it has been shown by the witness' testimony that there was no question as to the operativeness of this device, and as an attempt to mislead the witness. There is nothing in the record indicating that unusual care was required in the operation of the machine.

A. No.

Q. Not even as to the latching arrangement? A. I figured on making a change on the latching arrangement.

Q. Is it not a fact that you also abandoned this device because you did not conceive the advantage of the dumping bottom to be of sufficient practical worth to justify the expense of the re-design and further experimentation which would have been necessary in your opinion to make the device commercially useful? A. No—not to my recollection.

Q. I hand you a statement which has been acknowledged before a Notary Public on the 16th day of April, 1925, and ask whether you can identify the signature of Bernard R. Clutter as that of your own? A. It looks like it.

Q. I mark for identification the statement just identified by the witness as "Plaintiff's Exhibit A."

Cross examination closed.

Mr. Mahoney: The witness has been asked to identify a paper which he was not permitted to read, and I understand from counsel for plaintiff that he refused to offer this into evidence as an exhibit in this deposition, or to permit defendant's counsel an inspection of the document.

Mr. Edgerton: I hand the witness the statement previously referred to for his inspection. I will withdraw my statement.

Mr. Reed: The document was withdrawn after counsel for defendant had demanded the right to inspect the same, after it had been handed to the witness and inspection had been refused.

Mr. Mahoney: In view of the refusal of counsel for plaintiff to permit inspection of the paper in controversy, there will be no re-direct examination.

Deposition closed.

Mr. Richey: I will say, Your Honor, that the letter was submitted later, and it is among the papers brought up here.

Mr. Mahoney: This deposition of Bernard R. Clutter is offered in evidence, as well as the Exhibits, Nos. 24, 25, 26 and 27, that were offered in evidence during the taking of the deposition.

DEPOSITIONS FOR THE DEFENDANTS

Taken at Joplin, Missouri.

NOTICE OF TAKING TESTIMONY.

MR. PHILIP E. SIGGERS,
918 F Street, N. W.,
Washington, D. C.

MESSRS. RICHEY & WATTS,
1090 Union Trust Building,
Cleveland, Ohio.

Attorneys for Plaintiff:

Please take notice that defendant herein will take the testimony of the following people:

Phil Culbertson, 2431 Wall St., Joplin, Mo.,
W. L. Culbertson, 522 N. Sergeant St., Joplin, Mo.,
John Cummings, 20 S. Jefferson St., Webb City, Mo.,
M. A. Elsner, 317 N. Sergeant St., Joplin, Mo.,
Lysle L. Hazen, 714 Byers St., Joplin, Mo.

all of whom reside more than one hundred (100) miles from the place of trial herein, for use on behalf of the defendant at the final hearing of this cause, before Leela V. McCallum, a notary public in and for the County of Jasper, Missouri, who is not of counsel nor interested in this cause, at Room 402 Bartlett Building, 410½ Main Street, Joplin, Missouri, beginning on the 19th day of March, 1930, at ten o'clock a.m., and thereafter from day to day as the taking of the depositions may be adjourned; and such testimony will be so taken in accordance with the provisions of Sections 863, 864 and 865 of the Revised Statutes of the United States and the Federal Equity Rules.

You are invited to attend and cross examine.

EDWIN P. CORBETT,
Attorney for Defendant.

Dated March 12, 1930.

Service of a copy of the foregoing notice acknowledged, this 14th day of March, 1930.

RICHEY & WATTS.

PRINTER'S NOTE:

A like Notice was issued on behalf of the General Excavator Company and was signed by Mr. Edward L. Reed.

The following depositions were taken on behalf of both defendants, pursuant to the above notice, at the office of Leela V. McCallum, a notary public, Room 402 Bartlett Building, 410½ Main Street, Joplin, Missouri, commencing at ten o'clock a.m., on the 19th day of March, 1930. Counsel for all parties being present.

PHIL CULBERTSON, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Phil Culbertson. I reside at 2431 Wall Street, Joplin, Missouri. I am forty years old. At the present time I am a drilling contractor. I am testifying under subpoenas in these cases. I have no interest whatever in these cases. I was employed by the Keystone Driller Company of Beaver Falls, Pa. I think I began to work for this company in 1909 or 1910, and I worked for them about seventeen years. During that period I have been a salesman. While being employed as salesman I was located at Carthage and Joplin, Missouri. I worked out of Carthage and Joplin branch the major portion of the time. During the time while I was salesman for them the Keystone Driller Company manufactured drilling machines, excavators and pumps. I sold drilling machines and excavators. I am acquainted with Bernard R. Clutter who was formerly employed by the Keystone Driller Company. He was employed at the Joplin plant. His position was salesman and demonstrator for excavators. He operated the steam shovels. It was his duty to demonstrate the machine and show that it would do what it was claimed to do in their catalogs, and what salesmen claimed it would do. The machines I am referring to are Keystone excavators. At the time the Joplin Supply Company building at Third and Joplin Streets was erected I was living at Carthage, Missouri. The Keystone Driller Company's branch plant at that time was at Joplin, Missouri. I remember the time when the excavation on the Joplin Supply Company building was being done. Wallower Brothers had the contract for the excavation work on the basement. The machine which was used to excavate this basement was a model 3 Keystone excavator.

Q. I now hand you a copy of United States Letters Patent, No. 1,317,431 which has been offered in evidence

heretofore as Defendant's Exhibit No. 24, and ask you if the Keystone Model 3 Excavator was of the type shown in the drawing of this patent so far as the boom, ditcher stick and scoop mechanism was concerned? A. That's the boom and scoop they started the excavation with.

Q. The scoop which was first used was a Keystone pivoted scoop like that shown in the Letters Patent to which you have just been referred.

Mr. Edgerton: Objected to as leading.

A. Yes.

(Narrative continued.) B. R. Clutter operated the machine for Wallower Brothers on this job. His full name is Bernard R. Clutter. He was the same Bernard R. Clutter that had formerly been employed by the Keystone Driller Company as demonstrator. I have operated the Keystone Driller Company's Model 3 excavator, and have attempted to load dirt or spoil into wagons, the excavator having thereon a pivoted bucket like that shown in Defendant's Exhibit 24. I had difficulty in doing this and spilled the dirt over the sides. I couldn't hit the wagon. The Wallower Brothers I know had such difficulty in loading wagons with the Keystone excavator, on the Joplin Supply Company building, with the pivoted bucket on the instroke ditcher. Bernard R. Clutter was operating the machine at that time and I considered him a competent operator.

I know that changes were made on the Keystone Model 3 excavator to overcome the difficulties they were having on this Joplin Supply job in loading in the wagons with the pivoted bucket on the instroke ditcher. The changes that were made to overcome this were that he abandoned the kind of bucket he was using and substituted it with a skimmer type scoop, fastened on the machine in a rigid way that pulled backwards in the same way as the other type of scoop. In my previous answer I meant Bernard R. Clutter when I used the word "he." The dirt was dumped from the skimmer scoop through the bottom. When I referred to the skimmer type bucket I suppose it is the bucket that had been purchased by the owner of the machine for the regular skimmer scoop attachment on this Keystone excavator. They owned one, I suppose it's their own.

The skimmer type bucket which I have stated was made rigid to the instroke ditcher stick, was of the type

like that shown in Figure 1 of United States Letters Patent, 1,107,899, Defendant's Exhibit No. 25. The skimmer scoop shown in Defendant's Exhibit 25 was merely reversed on the instroke ditcher stick and used as a drop bottom scoop. To do this parts 44, 47, 48, 49, and 50 on patent 1,107,899 were removed, and the scoop fastened to the ditcher stick at approximately the same place as part 44 shown in this patent, and a bail added to the side wall as on the drag line ditcher. By drag line ditcher I mean the bucket as shown in patent No. 1,317,431. The skimmer bucket was mounted rigidly on the ditcher stick of the instroke machine. As I remember the blue print Defendant's Exhibit No. 26 shows the manner in which the skimmer scoop was attached to the instroke ditcher stick of the Keystone excavator under the direction of Bernard R. Clutter on the Joplin Supply Company job at Joplin, Missouri. The skimmer scoop was stripped of its members 44, 49 and 47 shown in Defendant's Exhibit No. 25 and the changes were made to adapt it to the instroke ditcher stick at the Keystone Driller Company in Joplin. I recall seeing Mr. Clutter at the Keystone plant while these changes were being made.

I remember that this Keystone excavator was actually operated on the Joplin Supply Company basement having this skimmer scoop rigidly attached to the ditcher stick, and dumping the dirt into wagons by dropping the bottom of the skimmer scoop. I actually saw this Keystone machine so operated on this job. Bernard R. Clutter was operating the machine at the time I saw it operating in this manner. Bernard R. Clutter closed the drop bottom of the scoop, by giving a little slack in the pull line, and catching the bucket which snapped it shut. I did not operate the machine myself on this Joplin Supply Company job with this rigid drop bottom bucket on, but I tried to handle the bucket and did. In other words, I got up on the machine and operated it to effect the closing of the bucket. I wanted to see if I could snap the bottom shut, and found I was able to do it.

Q. How did this rigidly attached drop bottom bucket on this instroke ditching machine as used on this Joplin Supply Company job compare with the results obtained by the use of the pivoted type bucket that was furnished by the Keystone Driller Company on this machine?

Mr. Edgerton: The question is objected to as it elicits opinion and the witness has not been qualified as an expert.

Mr. Mahoney: The witness has testified that he was a salesman of these machines for a number of years. He has also testified that he has operated these machines and observed both of the machines in question in operation and is therefore, certainly qualified to answer the question.

A. It made it possible to dump the dirt in the wagon and eliminated most of the over-spoil and done away with the clean up.

Q. How was this change considered by the officials and employees of the Joplin branch of the Keystone Driller Company? A. As far as I knew they were all very enthusiastic over it.

Q. How many times did you see this machine operate on the Joplin Supply Company basement, having the rigidly attached drop bottom scoop on the instroke ditcher? A. I don't know how many times I was down there.

Q. Were you down there to see it more than once? A. Yes.

(Narrative continued.) I do not recall how long this machine was used after it was changed to the rigidly attached drop bottom instroke ditcher on the Joplin Supply Company job. It finished the job, that is all I know. It had the drop bottom scoop rigidly attached to the ditcher stick when it finished the job. There were no other machines on this job that I ever saw. I do not recall the exact year in which this drop bottom scoop was attached to the instroke ditcher machine and used on this Joplin Supply Company basement job, but it was either in the fall of 1919 or the beginning of 1920. I recall that other employees of the Keystone Driller Company saw this rigidly attached drop bottom scoop used on the Keystone Driller Company's machine on the Joplin Supply Company job at Joplin in the fall of 1919 or the early part of 1920. The names of these employees were F. Oliver, F. W. Ransom and M. E. Blosser. As near as I can remember F. W. Ransom was manager for the Beaver Falls plant. Mr. F. Oliver was manager of the Joplin branch of the Keystone Driller Company. Mr. Blosser was salesman for the Keystone Driller Company at that time. I am not positive whether or not skimmer scoops manufactured by the Keystone Driller Company in 1919 and 1920 had side rake teeth. It is not just clear in my mind whether the skimmer scoop had any teeth attached

to the bottom that projected outwardly from the side walls so as to act as side rake teeth for cutting clearance for the bucket, or just how those teeth were arranged.

CROSS EXAMINATION by Mr. Edgerton.

I have not read the deposition of Bernard R. Clutter who has testified in these cases. When I operated the bucket during the excavation of the Joplin Supply Company's basement I did not perform an excavating cycle with the scoop. I am not positive whether that bucket was equipped with side rake teeth or not. I don't remember ever seeing this bucket as mounted on the Joplin Supply Company's excavation job in operation after the completion of the Joplin Supply Company's work. I did not see the excavation work started at the Joplin Supply Company's building site. I did not see the machine at the completion of the Joplin Supply Company job but before it was removed from the site of excavation.

Deposition closed.

W. L. CULBERTSON, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is W. L. Culbertson. I reside at 522 North Sergeant, Joplin, Missouri. I am a drill contractor. I was employed by the Keystone Driller Company. My connection with the Keystone Driller Company began, under an agency contract ending in beginning of 1907. From the beginning of 1907 on a straight salary until 1927. The duration of my agency contract was for ten years prior to 1907. My recollection is that this agency contract covered all the territory lying west of the Mississippi River. After my agency contract expired I was employed by the Keystone Driller Company originally at Carthage, Missouri, subsequently at Joplin, Missouri. The Keystone originally had a plant located at Carthage, Missouri, and later moved it to Joplin, Missouri. While I was employed by the Keystone Driller Company at Carthage and Joplin my title was assistant manager. My duties consisted in looking after collections, and passing on credits. I am sixty-five years of age. I am testifying under subpoenas in these cases and have no interest in them. I am acquainted with Bernard R. Clutter who formerly was employed by the Keystone Driller Com-

pany. I have known Mr. Clutter for approximately fifteen years. While he was employed by the Keystone Driller Company I would say he was an excavator demonstrator. I was employed by the Keystone Driller Company at the time the Joplin Supply Company began the excavation for the new building at Third and Joplin Streets, Joplin, Missouri. I do not know the name of the firm that had the contract for excavating this building. I know that the machine used to excavate the basement was a Keystone machine. I don't tell from a side view of it whether the machine so far as the boom, ditcher stick and scoop are concerned shown in Defendant's Exhibit 24 was the machine that was used in excavating the Joplin Supply Co. job. In my observation of the work being carried on which was the latter part, or about three-fourths of the yardage handled was done by pulling towards the shovel by a Keystone machine. The various times I saw the machine operating it was operated by B. R. Clutter, "Burn" we called him altogether. I recall that during the excavation work on this basement that the Keystone machine was changed. The first I knew of such a change, Mr. Oliver told me "Burn" had changed the scoop on the Joplin Supply Company basement work. He said that they had reversed the regular operating of the skimmer scoop, which was a forward thrust and drop bottom to pulling the skimmer scoop towards the shovel. In other words, they took the skimmer scoop and reversed it on an instroke ditcher stick. I saw this machine operating on the Joplin Supply Company job with the skimmer scoop reversed and attached to the instroke ditcher stick. At the time I saw it operating "Burn" Clutter was running the machine. I couldn't say how often I saw this machine operating with the skimmer scoop on the instroke ditcher stick but it was quite a number of times. The machine was operated a very short time as a skimmer scoop.

As to the time the machine was used as a drop bottom instroke ditcher, I don't know the days but the bulk of the dirt was principally handled after the shovel on the boom was changed, that is, changed to a drop bottom instroke excavator. I know that the officials and employees of the Keystone Driller Company saw and knew of this improvement. Some of the employees of the Keystone Driller Company who saw this machine in operation with this improvement thereon were Frank Oliver, Lysle Hazen, Phil Culbertson, Gene Blosser (deceased).

There may have been others, I don't know. I know that the officials and employees of the Keystone Driller Company regarded this change of scoops made on the Joplin Supply Company job as beneficial.

CROSS EXAMINATION by Mr. Edgerton.

I have not read or had read to me the deposition of Bernard R. Clutter who has testified in these cases. I don't know that I ever saw the drop bottom bucket as operated on the Joplin Supply Company's basement after the completion of the job. I couldn't say whether or not the drop bottom bucket used on the Joplin Supply Company excavation was provided with side rake cutting teeth.

Deposition closed.

(At this time an adjournment in the deposition session was taken until March 20, 1930, at ten a. m.)

(Deposition session resumed March 20, 1930, at ten a. m.)

JOHN CUMMINGS, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is John Cummings. I reside at Webb City, Missouri. I am a newspaper circulator. That is, I have charge of the circulation department of the Joplin Globe and the News Herald at Webb City. I am forty-six years of age. I am testifying under subpoenas in these cases and have no interest in them. I was employed by the Wallower Brothers of Joplin, Missouri, about twelve years. During the major portion of this time I was a mechanic for them. I was employed by Wallower Brothers during the years 1919 and 1920 and recall when the Joplin Supply Company building at Third and Joplin Streets, Joplin, Missouri, was being erected. Wallower Brothers had the contract for the excavation work on the basement of this building. I worked for Wallower Brothers on this job. The first work I did was fireman on the machine, and the second job was drilling and shooting the limestone we encountered on the excavation. The machine that was used to start the excavation was a No. 3 excavator. The first attachment used on this Keystone excavator when the basement was first begun was a skimmer scoop. The skimmer scoop is that type of

scoop that runs back and forth on the boom, without a ditcher stick or other attachments. The machine shown in United States Letters Patent 1,107,899, Defendant's Exhibit 25, was the type of machine that was first used on this job and is called the skimmer scoop. I don't remember how long this machine shown in Defendant's Exhibit 25 was used as to time, but I remember that about one-third of the excavation was made with the skimmer scoop machine. The next type of attachment that was used on this machine after the skimmer type attachment had been used was the ditcher scoop. The reason they made them change to the ditcher scoop attachment was because it became too muddy for the machine down in the basement. The machine was then put up on the bank and used as a ditcher scoop or instroke machine. The ditcher scoop that was used was like that shown in United States Letters Patent 1,317,431, Defendant's Exhibit 24. B. R. Clutter operated the Keystone excavator for Wallower Brothers on the Joplin Supply Company job. His first name was Bernard. The spoil that was taken from this excavation was loaded in wagons and hauled to different places to make fill. After we started work using the ditcher scoop attachment shown in Figure 1 of Defendant's Exhibit 24 the work did not progress very well. Mr. Clutter seemed to be unable to empty the ditcher scoop into the wagons without spilling a great amount of the clay and dirt. The machine at that time had the pivoted or pitch bottom scoop like that shown in Defendant's Exhibit 24. What caused the dirt to spill over the wagon sides I don't know. I think Mr. Clutter was a competent shovel operator. On the type of machine shown in Defendant's Exhibit 24 the bucket was dumped out at the end of the scoop, maybe I should have said the front end. When the latch was released the scoop fell and pitched the dirt out of the front end of the bucket in this type of machine. I think the pitching motion of the bucket when dumped is what caused the dirt to spill over the sides of the wagon. I don't remember about whether any difficulty was experienced in getting the sticky clay to fall out of the bucket with this pitch scoop on the instroke ditcher. There was a change made in the scoop on this instroke ditcher to overcome the difficulties in loading the spoil in the wagons. The change made was they took a skimmer scoop, attached it to the ditcher stick and used it.

It was made fast to the bottom of the stick. The skimmer scoop pitched like the former bucket until the latch was removed from the ditcher stick. In this scoop the dirt dumped from the bottom, the scoop unlatching at the back end. The scoop shown in Figure 1 of United States Letters Patent 1,107,899, Defendant's Exhibit 25, was the type of scoop that was attached to the instroke ditcher stick when this change was made. It was one of the scoops that had been furnished with the machine as a regular skimmer scoop. The blue print Defendant's Exhibit 26 shows the manner in which the skimmer scoop was attached to the instroke ditcher stick on the Keystone machine used on the Joplin Supply Company's basement excavation about which I have been testifying. The Joplin Supply Company basement excavation was made in 1919 or 1920 I don't know which. As to where the Keystone scoop was taken to have the changes made, I know that the Keystone truck called for it and delivered it back, so I suppose it was taken to their plant. After the scoop was brought back it was actually used on the Keystone ditching machine as a rigidly attached drop bottom bucket. The machine was operated by B. R. Clutter when rigged up in this manner. I don't remember the length of time the machine operated on this job as an instroke ditcher having a rigidly attached drop bottom scoop thereon, but I remember that about two-thirds of the excavation was performed with the scoop attached in this manner. There were no other excavators used on the job. This rigidly attached drop bottom scoop on the instroke ditcher performed the work very well. I do not remember that any trouble was had with the scoop rigged up in this way. I was fireman on the machine for part of the time during this excavation. I worked about and with steam shovels at other times prior to this, for Wallower Brothers. I acted as foreman on construction work of various kinds for Wallower Brothers. After this job was completed I did not work for Wallower Brothers after that. The reason was they were mining in Oklahoma and I lived in Webb City and as they moved their operations from Joplin to Oklahoma I did not care to go with them. I remember that Mr. Oliver, Mr. Hazen, that is Lysle Hazen, and Phil Culbertson of the Keystone Driller Company saw this Keystone excavator working on this Joplin Supply Company job with this rigidly attached drop bottom bucket on the instroke ditcher.

CROSS EXAMINATION by Mr. Edgerton.

The expression I used "drilling and shooting" means blasting the stone we found there. On the Joplin Supply Company excavation we did not blast the stone before we loaded it into wagons. I was not referring to some other job when I said that we were drilling and shooting. The kind of soil we excavated on the Joplin Supply Company job was black dirt, clay, boulder, and limestone. The limestone was blasted. The boulders were dug out with the machine. They were small enough to be loaded within the scoop.

Q. Now with respect to the excavator which has heretofore been referred to as the pitch scoop, what proportion of the work or spoil was dug with this machine? A. Well, which scoop does he mean?

Q. I refer you now to Defendant's Exhibit No. 24, and in connection with the preceding question please state what percent of the work or proportion of the soil was removed with this type machine. A. As I remember it was used about two days, probably loaded twenty-five wagons.

Q. Do you know of your own knowledge whether Mr. Bernard Clutter had ever operated a machine of the type illustrated in Defendant's Exhibit 24 before this Joplin Supply Company's basement excavation? A. No.

Q. You have testified that you considered Mr. Bernard Clutter a proficient operator, upon what is your judgment based? A. From the fact that he was employed by the Keystone Driller Company as a demonstrator of the Keystone shovels, and by his ability as I seen him operate them in comparison to other operators that I had noticed.

Q. Then you have seen him operate Keystone excavators before? A. Yes, sir.

Q. And machines of the type illustrated in Defendant's Exhibit 24. A. No.

Q. Who operated the latch while the pitch scoop like Exhibit 24, was employed? A. I don't remember.

Q. Do you remember whether or not you did? A. No. I did not.

Q. Who operated the latch on the drop bottom skimmer scoop, I might add, I don't mean the name of the man, but the position of the man assigned to this job?

Mr. Reed: Question objected to as indefinite, as it does not distinguish between the use of the skimmer

scoop as such and the use of the skimmer scoop on the instroke ditcher stick.

Mr. Edgerton: I will reform my question to specify the instroke ditcher stick.

A. The man standing by the side of the wagon would catch the rope, give it a pull which would drop the bottom.

Q. To the best of your recollection was this method of releasing the latch employed throughout the period that the drop bottom bucket secured to the instroke ditcher stick was employed in the Joplin Supply basement? A. Yes.

Q. Did you ever see the drop bottom scoop attached to an instroke ditcher stick used after this job at the Joplin Supply Company's excavation? A. No.

Q. Do you know whether or not the drop bottom scoop attached to the instroke ditcher stick was provided with side rake cutting teeth? A. I don't remember.

Q. Did you ever perform any of the excavating operations with the machine we have been referring to on the Joplin Supply Company's basement? A. No.

Deposition closed.

(Deposition session adjourned until March 21, 1930, at nine a. m.)

(Deposition session resumed March 21, 1930, pursuant to adjournment.)

M. A. Elsner, a witness called by defendants, being first duly sworn, testified as follows:

Direct Examination by Mr. Mahoney.

My name is Max A. Elsner. I reside at Joplin, Missouri. I am a building contractor. I am connected with the C. A. Dieter Construction Company. I am in general charge of this business. The C. A. Dieter Construction Company had the general contract for the construction of the Joplin Supply Company building at Third and Joplin Streets, Joplin, Mo. Wallower Brothers was the name of the company to whom the sub-contract was let for the excavation of the basement on this building. As to whether Wallower Brothers finished that work on the basement, the record shows that The Dieter Construction Company for the practical purposes of not leaving open excavation at the completion of the general excava-

tion made a certain yardage deduction from the contract with Wallower Brothers for column excavations, said column excavations to be completed when progress of the work made such work practical. The records further show that The Dieter Construction Company performed a minor portion of the general excavation for a part of which no specific date was indicated. With the exception of the deductions referred to The Wallower Brothers completed the excavation and received settlement therefor. The apparent final statement rendered by Wallower Brothers for this work is dated March 18, 1920. This statement shows the receipt in full by Wallower Brothers but does not indicate any date upon which the receipt for payment was given. The paper, however, on which this receipt is acknowledged is dated March 18, 1920. Referring to this paper the amounts next to the dates thereon indicate from partial records available that the amounts for the weekly payrolls of Wallower Brothers on this work. The date of the last payroll item on the paper dated March 18, 1920, to which I have been referring is March 13, presumably 1920. This paper dated March 18, 1920, shows that the original yardage to be excavated to be 5,636 yards from which a deduction of 84.32 was made and to which a yardage of 575.98 was added. The paper to which I have been referring is a legal size sheet bearing date of March 18, 1920, and the heading is "Wallower Brothers. Financial Statement of Account with C. A. Dieter." The contents of which is certain dates, financial amounts, yardage amounts, miscellaneous account notations, bearing a receipt in full for a settlement of said account as indicated thereon, said receipt being signed by Wallower Brothers. I obtained this paper from the files of the C. A. Dieter Construction Company. These files are under my supervision and control. I would not care to surrender the original of this paper as an exhibit for this deposition because I understand the deposition is to be filed in another state. I have compared what purports to be a photostatic copy of the paper to which I have been referring with the original, and to the best of my knowledge and belief it is a true and exact copy of the original.

Mr. Mahoney: The photostatic copy of the paper dated March the 18th, 1920, entitled "Wallower Brothers. Financial Statement of Account, with Mr. C. A. Dieter," which the witness has stated to be a true and correct copy of the original from

the files of the C. A. Dieter Construction Company is hereby offered in evidence as Defendant's Exhibit No. 28 and the Notary is requested to mark the same: "Financial Statement between Wallower Brothers and C. A. Dieter, dated March the 18th, 1920, for excavation work on Joplin Supply Company Building, Joplin, Missouri."

No cross examination.

Deposition closed.

LYSLE L. HAZEN, a witness called by defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Mahoney.

My name is Lysle L. Hazen. I reside at 714 Byers Street, Joplin, Missouri. My present occupation is assistant secretary of the Chamber of Commerce. I am thirty-nine years old. I am testifying under subpoenas in these cases, and have no interest therein. I have been employed by the Keystone Driller Company of Beaver Falls, Pa., and began to work for them about 1906 or 1907. My employment with them ceased on June 30, 1929. Just prior to leaving their employ I was general superintendent of the Southwestern Branch, and designing engineer at the same place. My office is located at Joplin, Missouri. As to my location with this company in the years 1919 and 1920 I will say that in the early part of 1919, I was in Germany. I got home about the latter part of May, and was sent to Joplin in the last part of June. For the remainder of 1919 I was superintendent of the Southwestern Branch of the Keystone Driller Company, and held that position in the year 1920. I recall the time that the Joplin Supply Company building at Third and Joplin Streets, Joplin, Missouri, was under construction, and remember when the excavation work was being carried on for this building. I think this was in the year 1920. Wallower Brothers had the sub-contract for the excavation for this building. That is, the basement excavation. A Keystone Model 3 excavator was used by Wallower Brothers for excavating this basement.

When the excavation work was first started Wallower Brothers used a skimmer attachment on the machine. As far as I know the words "skimmer attachment" is a trade name, but it is a scoop that runs parallel

with the boom, with a digging action away from the machine. United States Letters Patent 1,107,899, Defendant's Exhibit 25 in Figure 1 shows the attachment that I have referred to as the skimmer attachment that was first used when this basement job was started, but don't show the machine. The picture shows the same type of skimmer scoop attachment to which I have been referring. This type of attachment was not used on the machine throughout the entire excavation. There was a change in the type of attachments. The next type of attachment that was used on this excavation job for the Joplin Supply Company building, was a pull scoop. This is sometimes referred to as an instroke ditcher, I have heard it referred to that way. A pull scoop attachment for an excavating machine has the regular boom, a ditcher stick is hung from the end of it, the scoop is fastened to the end of the ditcher stick with the digging end of the scoop towards the machine.

Figure 1 of the drawings of United States Letters Patent No. 1,317,431, Defendant's Exhibit 24 shows the type of pull stroke attachment that was used on this Keystone machine on the Joplin Supply Company excavation so far as the boom, ditcher stick and scoop are concerned. The reason they changed from the skimmer scoop to the pull scoop on this job, Mr. Wallower told me that he was changing on account of the bottom of the excavation being muddy and hard to handle his teams in and out of the excavation. As I remember they had two operators on this machine for Wallower Brothers on the Joplin Supply Company excavation. The only one I knew was B. R. Clutter. His first name was Bernard, I have heard them call him "Burn." With the pull stroke scoop as shown in Defendant's Exhibit 24 they did not have any more trouble than was usual with that type of scoop. They had trouble unloading on account of the stickiness of the dirt and because of this they were breaking up wagons. This type of scoop was not efficient in dumping into wagons. Besides the foregoing reasons you couldn't get all of the spoil into the wagons because the wagons weren't big enough. Explaining that further, because of the arc described by the ditcher stick when the wagon is first spotted so the scoop could be tripped and then the scoop not being unloaded, the stick was straightened out and pulled away from over the wagon. It was either bumping the edges of the wagon or the bottom of the wagon with the scoop to shake the

dirt loose or lose part of it, when they straightened out the stick. The motion this scoop had when the latch was released was the end of the scoop which had the teeth on, or the open end dropped, being pivoted from the back of the scoop. I don't understand what you mean by the term "pitch and throw." When the latch was released and dropped, that is the front of the scoop dropped, if it had of been spotted in the right place when it was released, and dirt was loose enough to run out, I do not see any reasons why it should not all go into the wagons. As a matter of fact, they had trouble on this job in getting all of the spoil dumped into the wagon.

I knew that Wallowers took certain steps to get away from the trouble they were having loading the wagons with this pivoted scoop on this instroke ditcher machine on the Joplin Supply Company job. I was present when the plans for doing this were discussed. I remember how it was proposed to change the Keystone ditcher in order to get away from the trouble they were having with this pivoted scoop on this instroke ditcher.

Mr. Oliver and myself were talking to Mr. Herbert Wallower at the site of the excavation at Third and Joplin. During the conversation Mr. Wallower mentioned the trouble they had been having in unloading the dirt from the scoop and also of breaking the wagons. He said his cost of repairs and the hand work costs he had of shoveling the dirt into the wagons which had escaped from the scoop in unloading, that with all these he thought it would be cheaper to put the skimmer scoop back on, and to take the machine to the bottom of the excavation and finish it in the same manner in which they started it. He made the remark that on account of the skimmer scoop bottom tripping and dumping the dirt as it did he could unload all the dirt into the wagons without breaking the wagons. He said, "If that scoop that is on there now worked like the skimmer scoop we wouldn't be having this trouble." The skimmer scoop in question was lying over to one side of where we were standing talking. I measured the skimmer scoop and suggested we hang it on there and try out the scheme of dumping the dirt and still retain the pull scoop motion. I think Mr. Oliver raised the question, I am not sure, as to how the bottom could be closed if the skimmer scoop was rigged up as a rigidly attached drop bottom scoop on this ditcher stick. I told him I thought this could be done, but "let's call 'Burn' and if he says it can be done, I feel

certain it can." I don't remember exactly what Clutter said but I know he lined up with the idea right away. It was his opinion that the bottom could be closed if the skimmer scoop was rigidly attached to the instroke dipper stick. The skimmer scoop that was lying on the ground near the excavation was hauled out to the Keystone Driller plant.

At that place it was stripped of the rear housing parts 44, 47, 48, 49 and 50 as shown on Figure 1 of Letters Patent No. 1,107,899. It was then laid out and drilled to accommodate the pull scoop ditcher attachments. The next thing that was done was that bearings No. 2 and plates No. 4a were bolted and riveted to the skimmer scoop in the respective positions they occupied on the pull scoop. The numbers I have referred to are parts on Letters Patent No. 1,317,431. After these parts were put on, it was taken back to the excavation job, and the pull scoop in use on the machine at that time was taken off, and the skimmer scoop attached to the ditcher stick in the regular manner for attaching the pull scoop. When the skimmer scoop was attached to the ditcher stick, the digging or open part was to the machine. The pulling line was attached to the skimmer scoop. A standard pull scoop bail had been opened up and fit to the scoop. The line was attached to this in the regular manner. When the skimmer scoop was attached to the instroke ditcher stick in the regular manner it was not intended to swing on its pivot like the former scoop in dumping. That was just a matter of convenience, we intended to bolt the stick to the rear end of the scoop. The skimmer scoop was intended to work as a rigidly attached drop bottom scoop on this instroke ditcher. It was held rigidly at first by being latched into a digging position and clamped there by removing a small spacer from it under the guide and clamping down on, I think they call it the latch pin. Later on this bucket was held rigidly on this instroke ditcher by having a piece of wood stuck in there.

Referring to Defendant's Exhibit 26 this blue print shows the manner in which the skimmer scoop was held rigid. That piece of wood was put in the same as this is. After the skimmer scoop was rigidly attached to the instroke ditcher stick it was actually used on the Joplin Supply Company job. I actually saw it excavating on this job. At the time I saw it operating B. R. Clutter was one operator, and I don't remember the name of the

other one. As I remember it, Clutter was on it most of the time. This drop bottom was closed after a dumping operation by swinging the scoop on the end of the stick in towards the machine past the horizontal position of the stick, and then catching it quickly, or by swinging the open bottom in any position with enough force to make it close and latch. As to how long it took to adapt the skimmer scoop that was taken from the excavation site and brought to the Keystone factory to make the changes, I would say it was about two o'clock in the afternoon when they sent the scoop out to us, and it was five or six o'clock that evening when we had it ready to send back. I remember that I saw this rigidly attached drop bottom skimmer scoop operating on this Joplin Supply Company job, about every day until the job was finished, or rather until the scoop was changed back to a skimmer and the machine was taken to the bottom of the excavation to clean out the spoil from the foundation excavation. That is after the general excavation was complete there was some excavation done by the parties putting in the concrete footings, and the spoil to which I referred was this type of excavation, when the skimmer scoop was used again. This skimmer scoop was used as a rigidly attached drop bottom scoop on this instroke ditcher on the Joplin Supply Company job at least four or five weeks. There were no other excavators on the job. As to how it performed the work after it was rigged up with this drop bottom skimmer scoop rigidly attached to the instroke ditcher stick, I would say that before we put it on we used about half as many wagons as we did after that. It stopped the breaking up of the wagons, and also stopped the spilling of the dirt on the ground around the wagons.

Besides myself, the other employees of the Keystone Drilier Company who saw this machine in operation on this Joplin Supply Company job, operating with this drop bottom scoop rigidly attached on the instroke ditcher stick were Frank Oliver, W. L. Culbertson, Gene Blosser, Phil Culbertson, F. W. Ransom and there were some others from the shop, but I don't remember who they were. It's hard to answer what became of the machine after this Joplin Supply Company job was finished, particularly the scoops that had been used as drop bottom scoops, rigidly attached on the ditcher stick because there were two scoops changed. They were both of them changed back to skimmer scoops. One of them was made

into a special sand scoop for skimmer work when the machine was later sold by Wallowers.

I don't know where either of the scoops referred to are now. I know that the Keystone Driller Company made an attempt to locate these scoops after the machines were sold by Wallower Brothers. I have never seen this scoop after this job, but I was told that one of them was located by Keystone. F. W. Ransom and Rex Downie told me this. I couldn't tell you the date when the search for these scoops was made. The first I knew of it was approximately five or six years ago. Wallower Brothers did not have any trouble with this drop bottom scoop rigidly attached on this instroke ditcher stick on this Joplin Supply Company excavation. Nothing unusual with the exception that maybe once in a while the bottom would become unlatched on account of not properly bracing the corners when we had it in the shop. As to whether or not the skimmer scoops that were used on this instroke machine as rigidly attached drop bottom scoops, had any side rake teeth thereon, if you mean side rake teeth attached to the side of the scoop, it didn't have any. The corner teeth were the standard teeth then in use with one corner projecting to the outside to protect the hinge. That is the hinge of the drop bottom. Two scoops were rigged up for use as drop bottom scoops on this Joplin Supply Company job because everybody that saw it from then on I think wanted to add a little additional, and as they got an idea we took the extra scoop not in use and built their idea into it. I think all of these ideas principally related to the latch. The type of latch that was first used on this drop bottom bucket on the instroke ditcher, on the Joplin Supply Company job, was a regular skimmer scoop latch with the upper end lengthened and a flat place put on it for a seat and between the seat and the back of the scoop a compression spring was inserted, held in place by a bolt running through the seat, spring and back of scoop. The pull line was attached to the bottom or below the hinge of the latch.

As far as the operation was concerned and as long as the tripper or the man pulling the line was careful to keep all of the slack out of the line during the digging operation, it worked very well. But it wasn't satisfactory because the tripper would get careless and the line would foul in the digging operation and trip the bucket.

This difficulty was corrected. We made a latch trip which had a motion for tripping towards the operator instead of away from him, the line when attached to this avoided the former difficulty.

CROSS EXAMINATION by Mr. Edgerton.

I never saw the drop bottom scoop attached to the ditcher stick as used in the Joplin Supply Company's excavation in operation after the completion of this job. To the best of my knowledge I would say that the portion of the excavation made with the skimmer scoop in the beginning of the excavation would be about fifteen per cent. I do not mean by that fifteen per cent below the grade line. I mean fifteen per cent of the total amount of the dirt removed. The swinging scoop instroke ditcher I would say removed about thirty-three and one third per cent of the total amount of the dirt removed. The manner in which the teams or wagons approached the machine when they went into the excavation, is that they back in at the start of the excavation, and after they got down the incline they headed in, turned around and backed in along side of the machine parallel. I don't know whether any breaks or fractures developed at the corners of the drop bottom skimmer scoop. There was nothing persistent encountered due to counterwise springing of the body and the consequent disengagement of the latch. There was accidental unlatching due to the flexure of the scoop. The scoop did not have any bridging structure between the side walls except the rear end wall. I don't know if the bottom could be closed when the stick was in the position of forty-five degrees beyond the vertical. You say you mean while it was hanging in that position. The bottom can be closed if it isn't hanging.

Q. What do you mean by hanging? A. I mean with the scoop or stick or any part of the mechanism not touching the ground, being held up by the machine.

Q. Now do you mean that the bottom could be closed when the entire scoop structure is supported in the air and positioned 45 degrees beyond the vertical? A. I don't know about that.

(Narrative continued.) I don't know whether the bottom was ever closed by snagging the teeth on the floor of the excavation, I never seen it done. As to whether or not it is true that three different forms of latches

were tried, if you mean by the latch, also the tripping mechanism, I would say that there were at least three. I believe it was the last form of latch that was used that the driver on the wagon tripped. There was no line on this latch. It was tripped by the driver who took hold of the place where the line was supposed to be fastened, when the long line was in use which at first went back to the tripper. It was found that the driver could trip it as well from his seat on the wagon so the line was detached. I don't know whether the standard side tooth employed in the skimmer scoop actually protected the pivot bolt in the bottom, in either the skimmer scoop, or the drop bottom scoop supported on the ditcher stick by the instroke ditcher. I don't know whether the standard side tooth would actually cut a clearance sufficient to protect the bottom pivot bolt or the other protruding beyond the outer walls of the scoop. In the first form of latch that was used on the drop bottom scoop mounted on the instroke ditcher stick the man who operated the latch when the ditcher stick or scoop was in the hole, he was on the edge of the hole paying out or taking in lines, then as the scoop came around with the load of dirt he got around on the opposite side of the wagon from the operator's position. He unlatched the scoop at this point.

Q. Will you please state whether or not any other difficulties were encountered in the structure or mode of operation of the drop bottom ditcher scoop supported on the instroke ditcher stick apart from those heretofore enumerated, such as the latch? A. Outside of at first we had a little trouble with our hinges but after they started to grease them they had no more trouble that I know of. That's all I know of.

Q. Did either of the operators who were handling the drop bottom scoop attached to the stick of the instroke ditcher as a matter of fact strike a gravity blow with this apparatus? A. Yes.

Q. Was there any outward bowing of the side walls or inward distortion of the rear end wall when such a blow was struck? A. I don't know, I never noticed any.

Q. Will you state please how the latch acted when the blow was struck? A. I never noticed any action at all.

Q. How great a blow was struck? By that I mean what distance was the scoop permitted to fall? A. I couldn't answer that. I'm not a qualified operator at all.

Q. You have stated that a gravity blow was struck, now do you recall whether the bucket was permitted to fall over say a foot? A. Well I never noticed any difference in the way they used that bucket and the way they used what was then the standard pull scoop. It looked as if sometimes it would fall three or four feet, but it's hard to tell sometimes how far it's falling by observation on account of the friction control.

Q. Did you ever see the operator deliberately strike a gravity blow of three or four feet and repeatedly do so on limestone for the purpose of fracturing the same, during this excavation at the Joplin Supply? A. No, sir.

Q. Did you ever see the operator deliberately strike a gravity blow of any height for the purpose of fracturing limestone? A. I've seen him strike a gravity blow or what looked like a gravity blow for the purpose of breaking up or dislodging boulders, I don't know whether limestone or not.

Q. Did you see the operator strike a gravity blow upon a boulder and with such accuracy and force as to break it up? A. I don't remember of ever seeing him do that.

Deposition closed.

(Certificate of Notary omitted.)

Mr. Mahoney: The depositions of Phil Culbertson, W. L. Culbertson, John Cummings, M. A. Elsner and Lysle L. Hazen are all offered in evidence, as well as the exhibits that were offered during the taking of those depositions.

Mr. Mahoney: The next deposition is an important deposition, Your Honor, but I will go through with it as briefly as I can.

The Court: Well, if it is important, you read it, all of it.

Mr. Mahoney: Your Honor, in order to clear up the record here I notice in checking up that there are some of the depositions that were not offered, according to the record, so Defendant's Exhibits 34, 35, and 36, that were offered in connection with the Wagner deposition, which was read here yesterday, Frank H. King and Exhibits Nos. 53, 54 and 55, are hereby offered in evidence, and the deposition of

offered in connection with the taking of that deposition, are hereby offered in evidence; Defendant's Exhibit No. 15 in connection with the deposition of William E. Stein, is hereby offered in evidence; the deposition of Joseph Moschenrose is hereby offered in evidence; the deposition of George Stone is hereby offered in evidence. The Exhibit No. 18 that was used in connection with the deposition of Thomas G. Dunn is hereby offered in evidence, and the exhibits that were used in connection with the Bernard R. Clutter deposition this morning, Nos. 24, 25, 26 and 27, are hereby offered in evidence, and Defendant's Exhibit No. 28 offered in evidence with the deposition of Mr. Elsner, is also hereby offered in evidence,

The deposition of Herbert H. Wallower is also offered in evidence.